

San Francisco City Planning Commission

Environmental Impact Report

DAON BUILDING

BATTERY AND SACRAMENTO STREETS

Final

EE 79.57

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Publication Date: 15 February 1980

Public Comment Period: 15 February 1980
through 3 April 1980

Public Hearing Date: 20 March 1980

Certification Date: 12 June 1980



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and Sacramento Streets
19801

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I. SUMMARY

A. PROJECT DESCRIPTION

● The proposed project site is located at the southeast corner of Sacramento and Battery Sts. in Lots 14, 15 and 16 of Assessor's Block 237. The proposed 25-story, 351-ft.-tall office building, would contain approximately 289,000 gross sq. ft., exclusive of 1 mechanical floor. The facade of the building would be a lightweight material and tinted glass; there would be landscaped setbacks at the 2nd, 6th and 14th floors. The ground floor would have about 8,300 net sq. ft. of retail space off an open pedestrian walkway passing diagonally between Sacramento and Battery Sts. The 2nd through 24th floors would contain about 239,000 net sq. ft. of office space. The 25th floor would be a double-height mechanical floor. No off-street parking would be provided; there would be 2 loading docks.

Demolition of the 3 existing buildings on the project site would start in 1980 and take about 8 weeks. Excavation and construction would then continue for about 18 months until project completion and occupancy in late 1981.

B. ENVIRONMENTAL EFFECTS

The proposed project would comply with zoning use and height and bulk limitations for the site. Construction of the project would require demolition of 3 buildings; 2 of these are rated "0" and "1" in the Department of City Planning's 1976 Architectural Inventory and "B" in the 1979 Heritage architectural survey and historic resources inventory. The open pedestrian walkway with shop windows would provide pedestrian interest. The project would add to the cumulative visual impact on the skyline of development under construction and proposed for the Downtown business district; it would not obscure views of the Bay from pedestrian levels on Nob or Telegraph Hills. During the spring and fall the project tower would shade the podium level of

I. Summary

Two Embarcadero Center in the early afternoon. It would add to the shadowing of that area on winter afternoons.

Demands for water, sewer services, solid-waste disposal, and police and fire protection would increase during construction and operation of the proposed project. These demands could be met by existing systems; no additional police or fire department personnel would be required. Extension of telephone conduit would disrupt 1 of 2 lanes of traffic on Sacramento St. for up to 2 weeks. It is estimated that the proposed project would provide about 190 person-years of construction employment. Approximately 1,200 persons would be employed at the completed building, as compared to current employment on the site of about 220 persons. Eleven businesses would be displaced from the site. After completion, the project would generate a net increase over existing total composite property tax revenues to San Francisco of between \$229,500 and \$270,200.

- Construction trucks would increase truck traffic on access streets and haul routes. Project-generated traffic would cause increases in traffic on adjacent streets ranging from about 3% on Battery St. to about 8% on Beale St. This would increase the volume-to-capacity ratios at the intersections studied, but would not reduce the Levels of Service. No parking would be provided on the site in accordance with the revised Downtown Transportation Plan.

Pile driving and the operation of construction equipment could temporarily raise noise levels from about 75 dBA to 80 to 85 dBA within buildings across Battery St. which require open windows for ventilation. Increased noise levels due to project operation would not be measurable.

The project would be designed and constructed to be within the minimum standards for energy conservation established by the California Energy Commission. Annual electrical consumption would be about 4.7 million kilowatt hours; annual natural gas consumption would be about 3.1 million cu. ft.

- The project would contribute incrementally to the impacts of development now under construction and proposed in the Downtown business district. These

cumulative impacts include increased demands for water and sewer services, solid-waste disposal, energy and police and fire protection; increased vehicle and pedestrian traffic, parking demand and transit ridership; and impacts on regional air quality. The project could contribute to a short-term cumulative oversupply of office space in the 1980s.

C. ALTERNATIVES TO THE PROPOSED PROJECT

The no-project alternative would preserve options for future development of the site. The 2 existing buildings rated "0" and "1" in the 1976 Architectural Inventory and "B" in the Heritage survey would not be demolished.

An alternative design would maximize the floor area, while continuing to conform to zoning use and height and bulk limitations for the site. Such a building would be about 400 ft. tall and would be set back from the eastern property line to provide a passage between Sacramento and Halleck Sts. It would have about 23% more floor area than the proposed project. Shadow and wind effects, demands on community services and volumes of traffic generated would be greater than the effects of the proposed project.

An alternative which would conform to the Initiative to Limit the Height and Floor Area Ratios of Buildings in Downtown San Francisco (defeated on Proposition 0 in the November 1979 election) could be developed on the site. At the Basic Floor Area Ratio of 8 to 1, such a design would contain about 1/2 the floor area of the proposed project. If housing were added, the gross floor area could be increased by the housing bonus to about 245,000 sq. ft. (15% less than the project as proposed); about 40 residential units in Downtown San Francisco would then be provided.

An office building could be designed retaining the facades of 353 Sacramento St. and 280 Battery St. Preservation of the facades would reduce the change to the existing pedestrian environment caused by the proposed project. Development of an integrated architectural design would be difficult because the 2 buildings are not of the same height or style, nor do they have the same floor-to-ceiling heights.

II. PROJECT DESCRIPTION

A. OBJECTIVES OF THE PROPOSED PROJECT

- Daon Corporation, a Canadian development firm with offices in San Francisco, proposes to construct an office building in Downtown San Francisco to provide a return on invested capital. The project, designed by the San Francisco office of Skidmore, Owings and Merrill, is intended by its sponsors to be a part of the Downtown Office District which is described in Section 210.3 of the City Planning Code (Part II, Chapter II of the San Francisco Municipal Code) as "playing a leading national role in finance, corporate headquarters and service industries, and serving as an employment center for the region", and which consists "primarily of high quality office development". The District is one in which unrelated uses are excluded "in order to conserve the supply of land in the core and its expansion areas for further development of major office buildings".

B. LOCATION OF THE PROPOSED PROJECT

The proposed Daon Building would be located at the northwest corner of Assessor's Block 237, which is bounded by Battery, Front, Sacramento and California Sts. Halleck St. bisects the block (see Figure 1). The building would entirely occupy Lots 14, 15 and 16 which contain about 17,500 sq. ft.

The project site is in the northeastern portion of the Financial District, immediately south of One Embarcadero Center, and fronts on Sacramento and Battery Sts. The site is about 3-1/2 blocks from the Embarcadero Station of the Market St. subway which serves the Bay Area Rapid Transit system (BART) and the future Muni Metro light rail system, and within 5 blocks of other regional transit systems, including SamTrans, A-C Transit and the Marin ferry boats. The site is served by Muni buses on Battery and Sacramento Sts., a cable car line on California St. and the Golden Gate Transit bus lines on

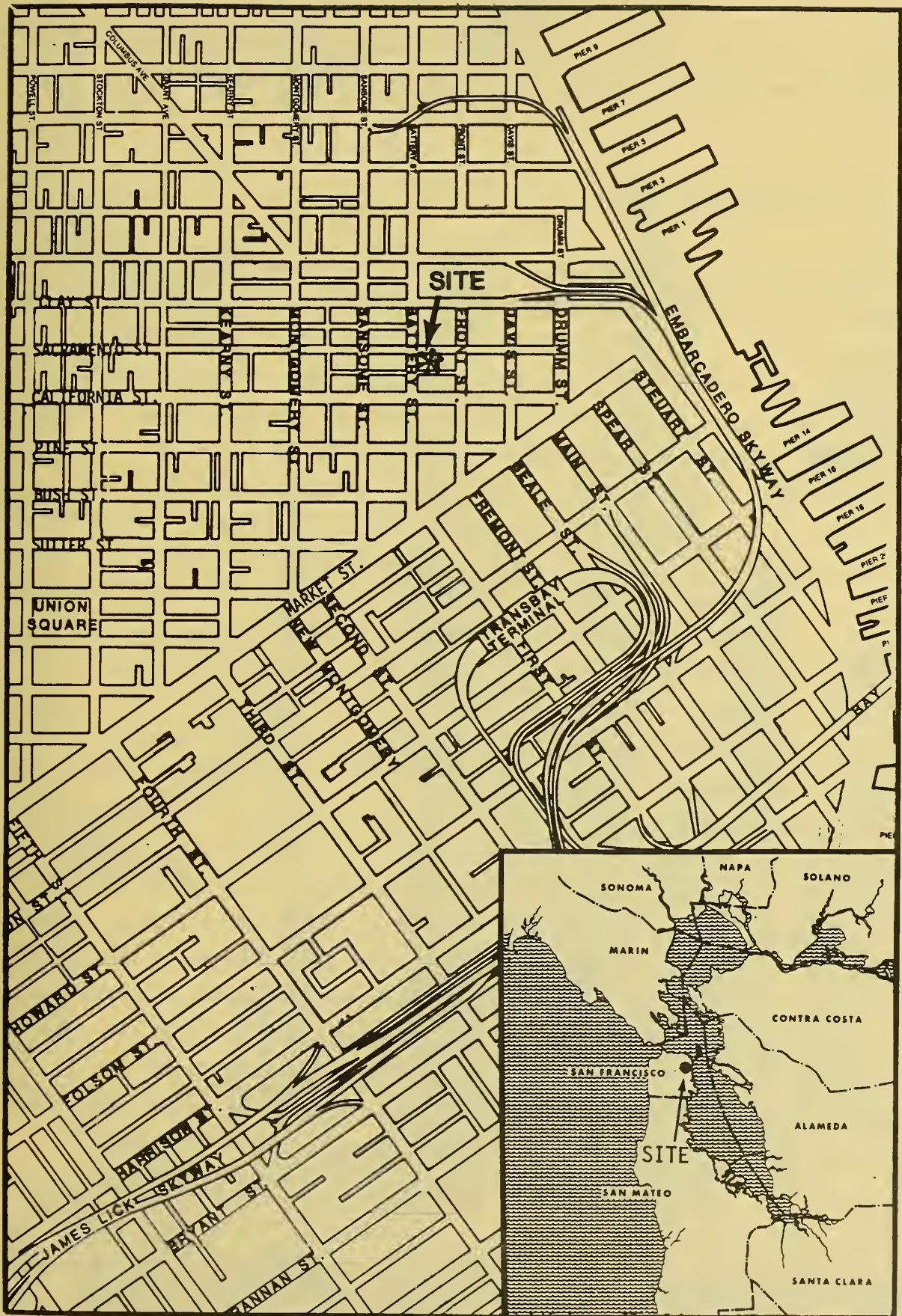


FIGURE 1: SITE LOCATION IN RELATION
TO THE BAY REGION AND TO
DOWNTOWN SAN FRANCISCO

Battery St. Freeway ramps connecting with the San Francisco-Oakland Bay Bridge (I-80) and the Bayshore Freeway (U.S. 101) are within 5 blocks of the site.

C. SITE AND BUILDING PLAN

- The proposed 351-ft.-high project would have 25 stories, including 24 stories of usable space and a double-height mechanical floor. The facade would be a curtain wall of a lightweight material with non-glare, tinted glass in a horizontal arrangement; gray glass is currently under consideration (see Figure 2 and Figure 2a, p. 7a). The building would have 3 setbacks. A rectangular setback would be placed at about 30 ft. on the second floor along Sacramento St. The sixth floor would have a triangular setback at about 80 ft. at the corner of Battery and Sacramento Sts. between the entranceways, and the 14th floor (about 185 ft.) would have a triangular setback at the corner of Halleck and Battery Sts. (see Figures 3 through 6, pp. 8 through 11, for Project Elevations). Planters with small evergreen trees and shrubs, appropriate to the exposed location, would be placed on each setback.
- The gross floor area of the building, excluding the mechanical floor and 2 loading docks, would be about 289,000 sq. ft. Approximately 277,000 gross sq. ft. of offices would be located on the second through 24th floors; this would be about 239,000 net rentable sq. ft. The 12,000 gross sq. ft. of floor area on the ground floor would include a lobby with elevators serving the office floors, 3 areas containing 8,300 net sq. ft. of retail space (see Figure 7, p. 12). An open pedestrian way would pass diagonally through the building, connecting the sidewalks on Battery and Sacramento Sts. and leading to the lobby. Shop windows for the retail areas would front on the sidewalks and pedestrian way (see Figures 8 through 10, pp. 13 through 15, for representative floor plans). No off-street parking would be provided.

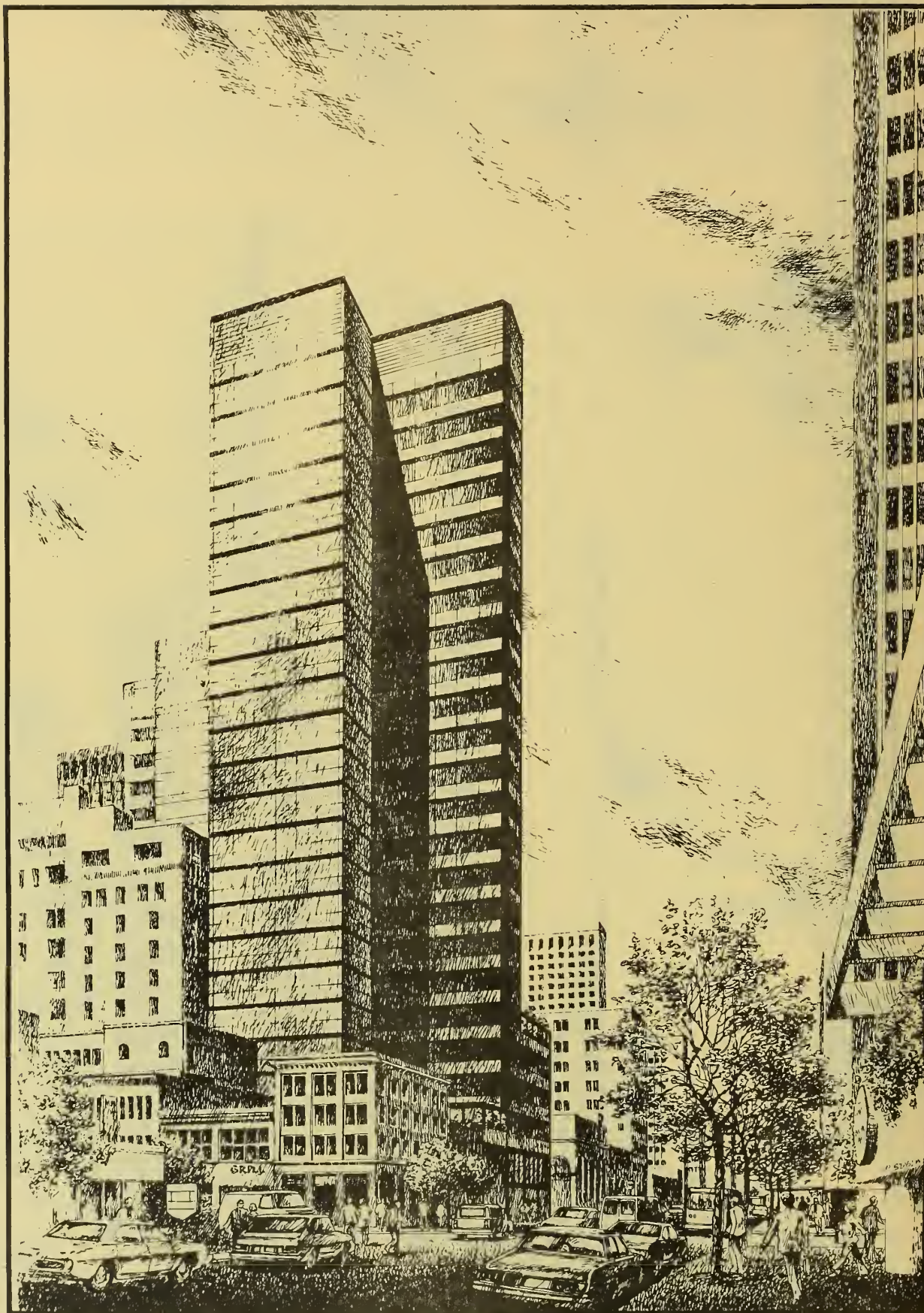


▲ One Embarcadero
Center

▲ **PROPOSED
PROJECT** ▲

▲ Fidelity Savings
and Loan ▲

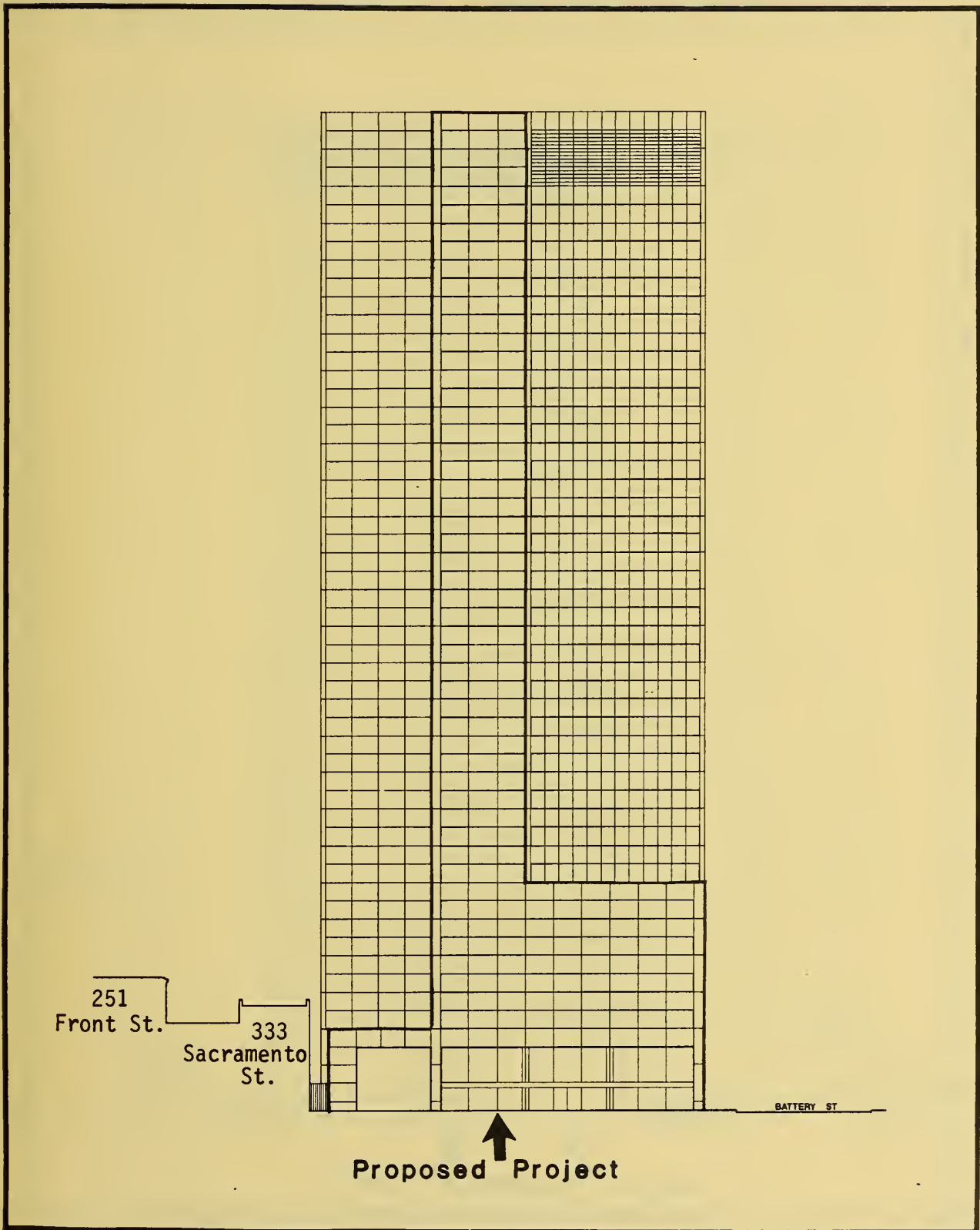
● FIGURE 2: ARTIST'S RENDERING OF THE
PROPOSED PROJECT. VIEW
FROM THE NORTHWEST CORNER
OF BATTERY AND SACRAMENTO STS.



PROPOSED PROJECT

Two Embarcadero
Center

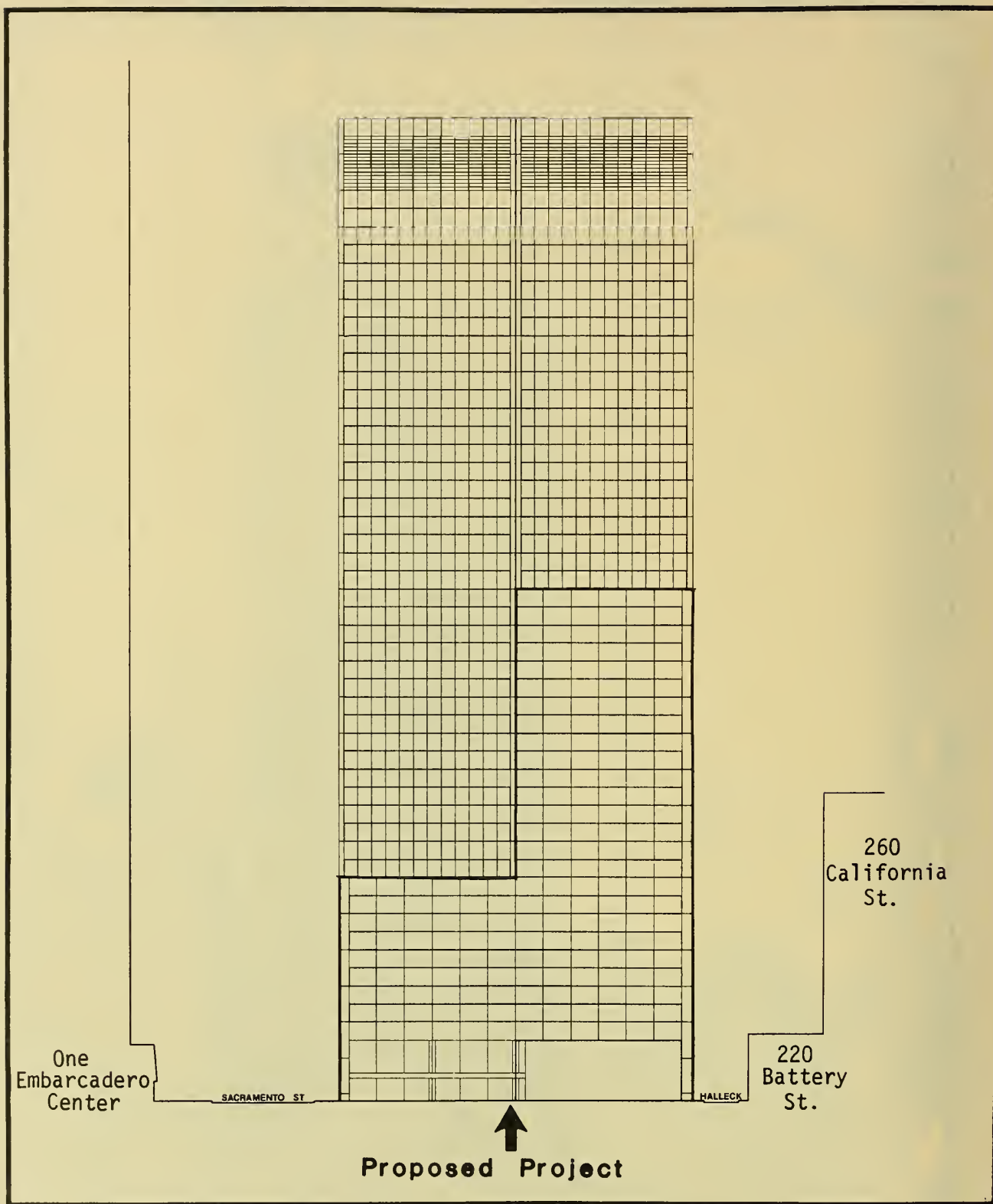
- FIGURE 2a: ARTISTS RENDERING OF THE PROPOSED
PROJECT. VIEW OF THE SACRAMENTO ST.
7a SETBACK ACROSS SACRAMENTO AND FRONT STS.



0 60'

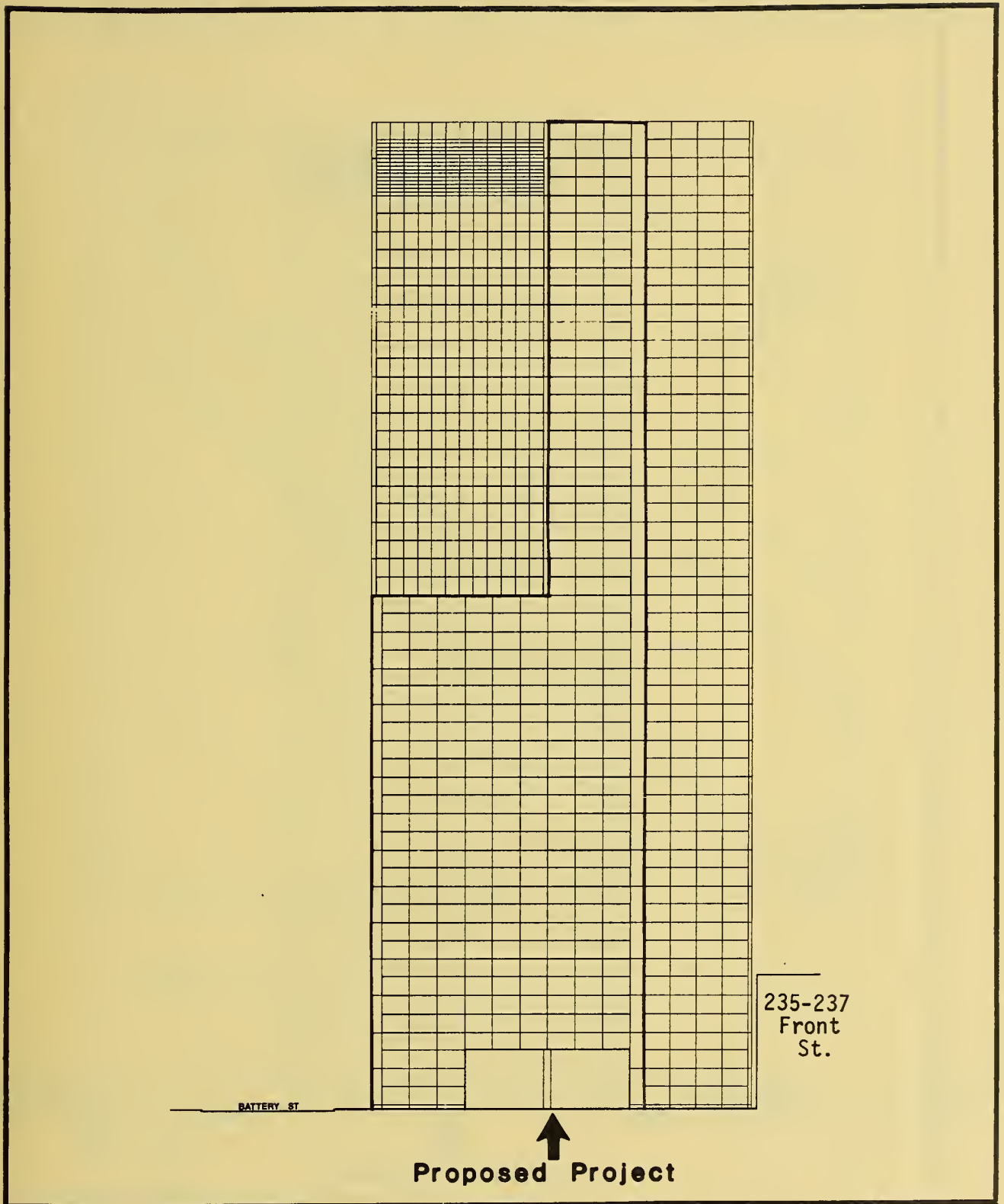
SOURCE: Skidmore, Owings & Merrill

FIGURE 3: NORTH ELEVATION
(SACRAMENTO STREET)



SOURCE: Skidmore, Owings & Merrill

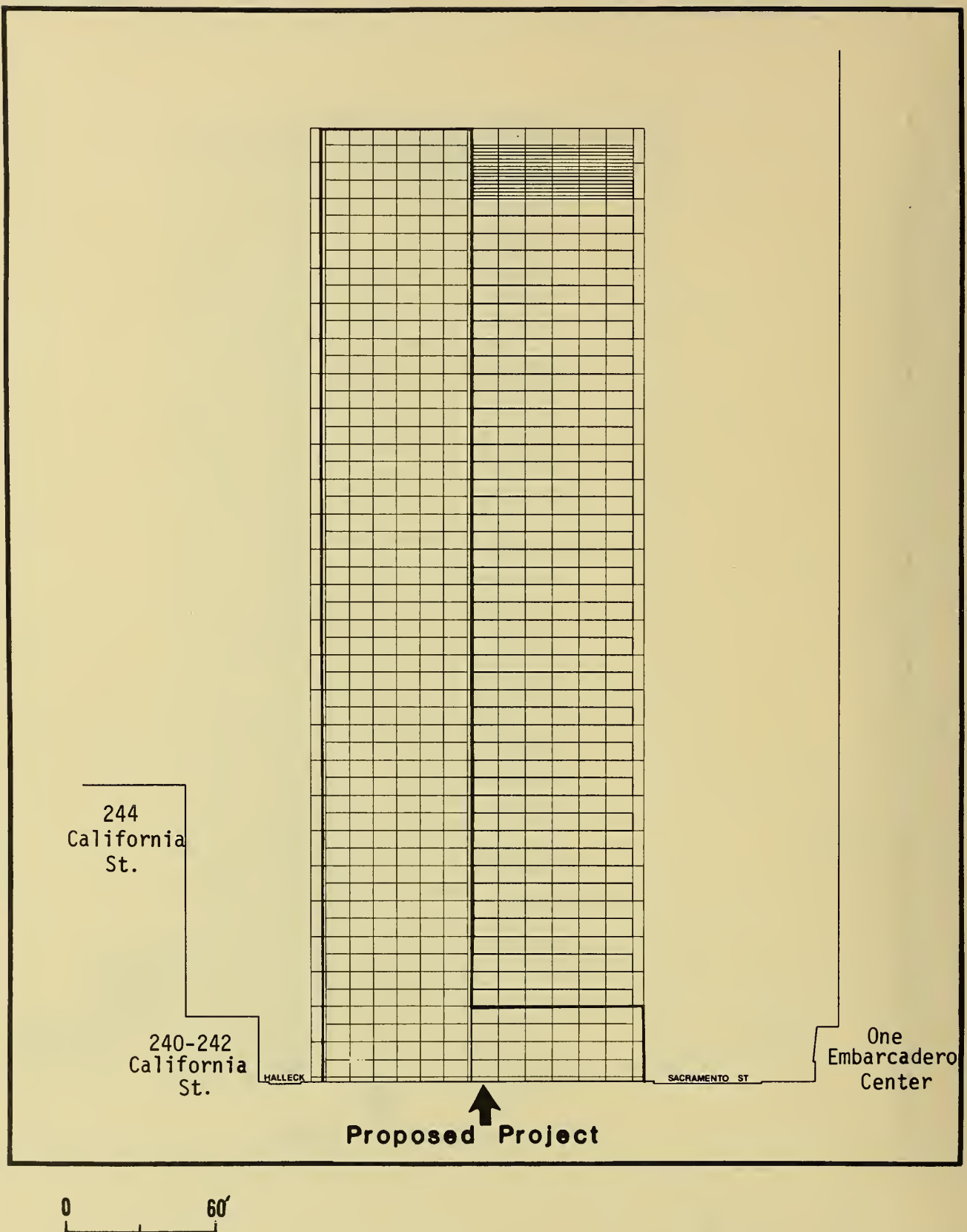
FIGURE 4: WEST ELEVATION
(BATTERY STREET)



0 60'

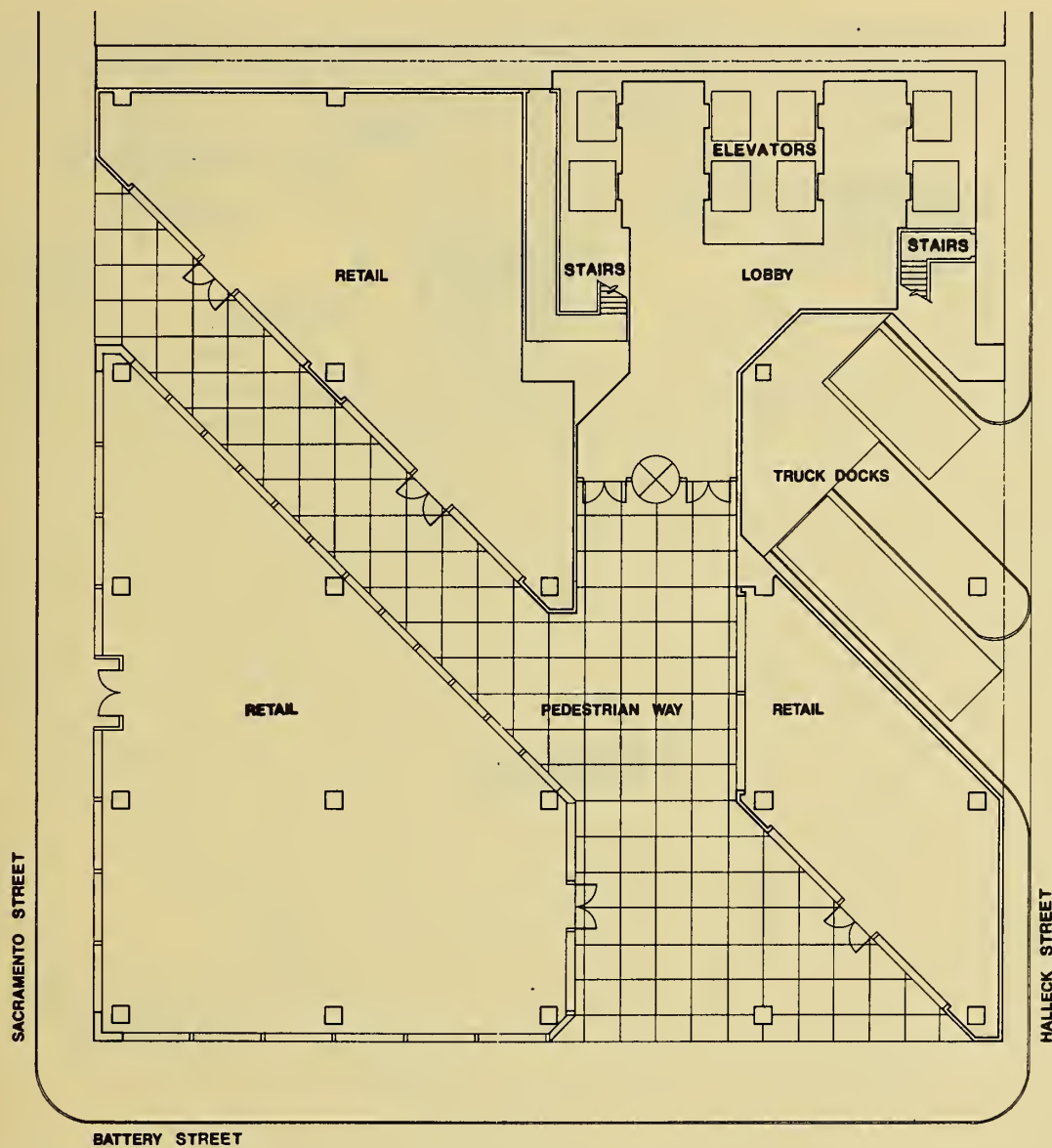
SOURCE: Skidmore, Owings & Merrill

FIGURE 5: SOUTH ELEVATION
(HALLECK STREET)



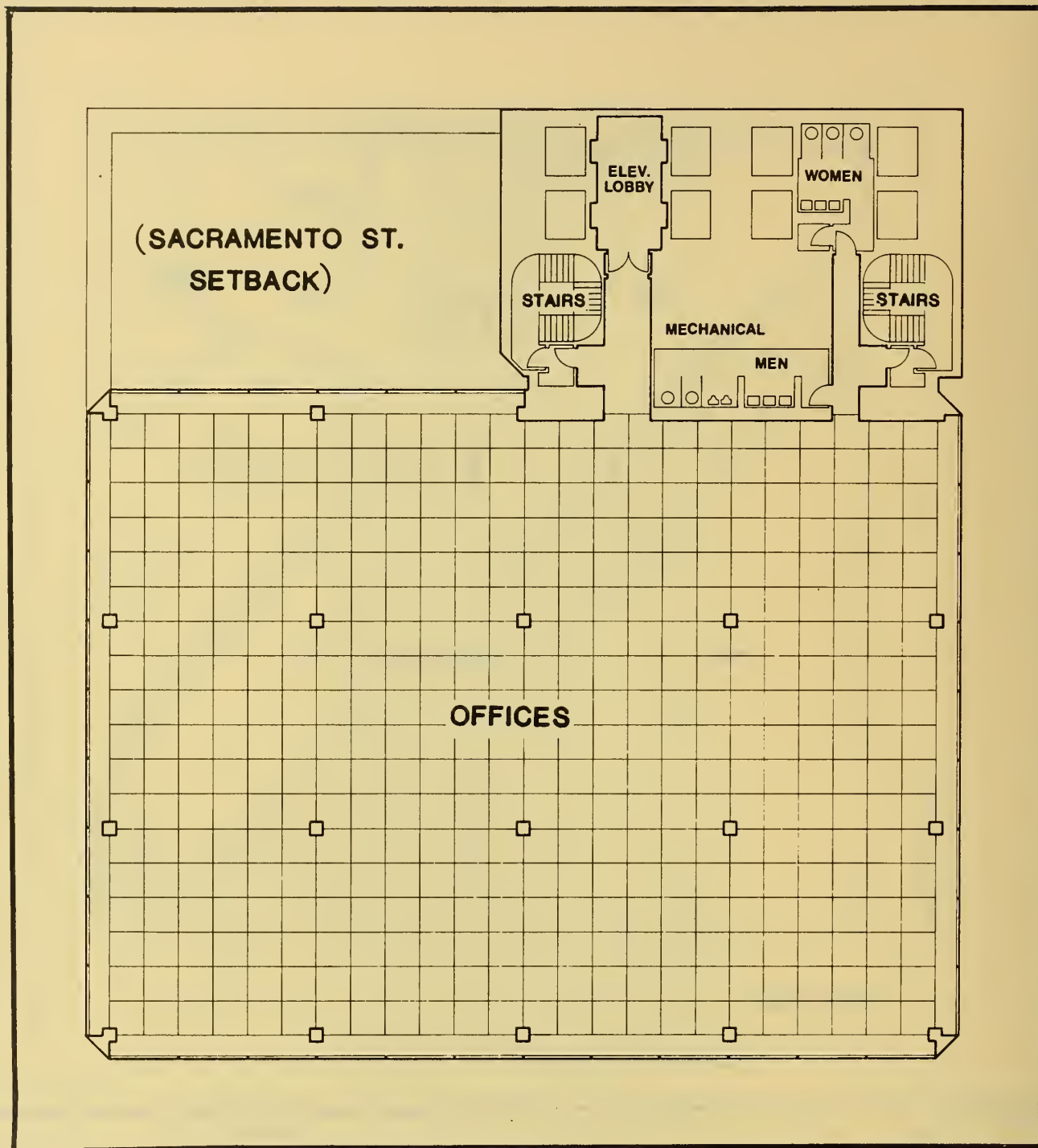
SOURCE: Skidmore, Owings & Merrill

FIGURE 6: EAST ELEVATION



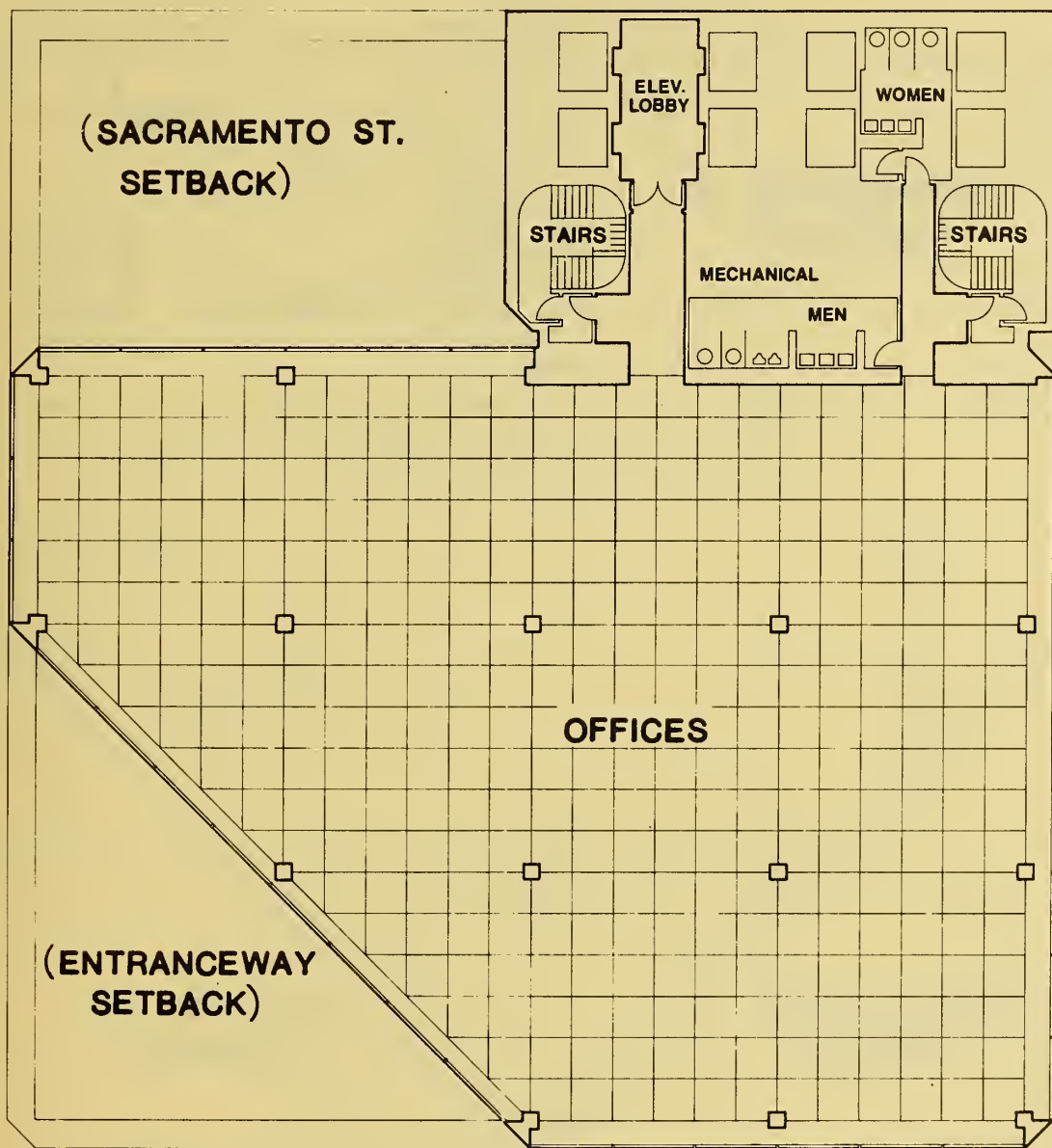
SOURCE: Skidmore, Owings & Merrill

● FIGURE 7: GROUND FLOOR AND SITE PLAN



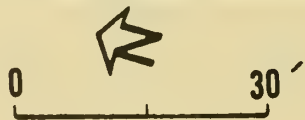
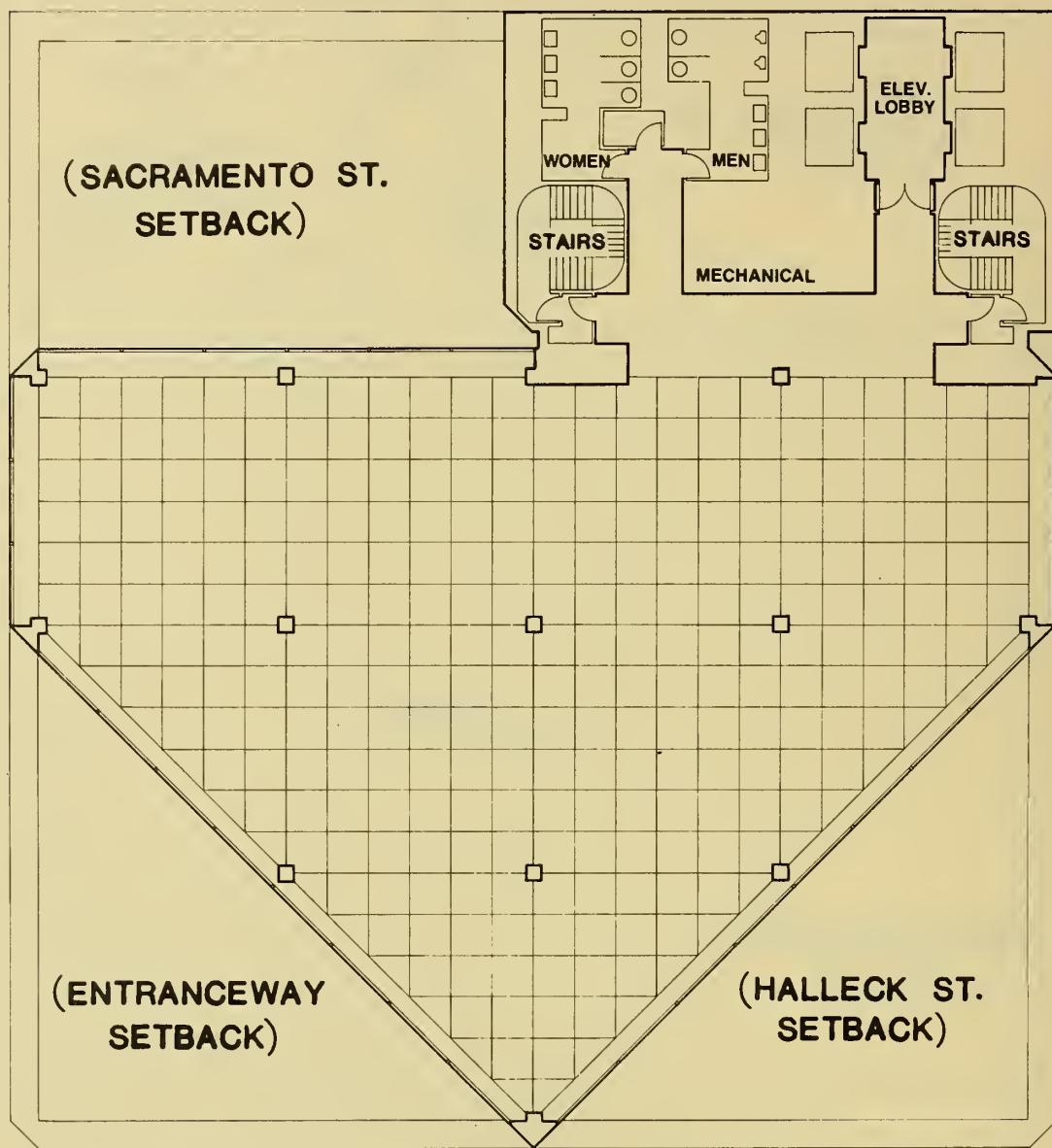
SOURCE: Skidmore, Owings & Merrill

FIGURE 8: FLOORS 2 THROUGH 5



SOURCE: Skidmore, Owings & Merrill

FIGURE 9: FLOORS 6 THROUGH 13



SOURCE: Skidmore, Owings & Merrill

FIGURE 10: FLOORS 14 THROUGH 24

II. Project Description

D. PROJECT SCHEDULE, REQUIRED ACTIONS AND COSTS

Detailed design of the Daon building and certification of the Environmental Impact Report (EIR) are scheduled for mid-1980. Demolition of the buildings on Lots 14, 15 and 16 would begin in 1980, after approval of the project by the City Planning Commission and issuance of demolition, site and other permits, followed by construction of the project (see Table 1). First occupancy is scheduled for late 1981. The cost of construction is estimated to be about \$23 million in 1979 dollars.

TABLE 1: SCHEDULE OF CONSTRUCTION FOR THE DAON BUILDING

<u>Building Activity</u>	<u>Weeks</u>
Demolition	8
Excavation	10
Building Structure (steel)	17
Architectural Finishes	22
Interior Finishes	<u>26*</u>
TOTAL	83*

*Does not include all tenant improvements; these could take longer.

III. ENVIRONMENTAL SETTING

A. LAND USE AND ZONING

LAND USE

The project site is the northwest quadrant of Assessor's Block 237, bounded by Sacramento, Battery, California and Front Sts., in the downtown district of San Francisco. The block is presently occupied by older, pre-1950 office buildings, with ground floor retail uses, ranging from 2 to 11 stories. Halleck St., a 20-ft. wide alley used for service vehicle access, bisects the block from east to west and forms the southern boundary of the project site. The site itself presently includes 3 buildings; 240-248 Battery St. (which includes 335-337 Sacramento St.), 280 Battery St., and 353 Sacramento St. All of these structures have retail services on the ground floor, including restaurants, photo supplies and clothing stores (see Figure 11). Two are 2-story structures. The building at 353 Sacramento St. is 6 stories. See Table 2 for the amount of existing rentable space on the site.

TABLE 2: EXISTING NET RENTABLE SPACE ON THE SITE

240-248 Battery St. (includes 335-337 Sacramento St.)	2 stories	24,700 sq. ft.*
280 Battery St	2 stories	2,800 sq. ft.
353 Sacramento St.	6 stories	<u>12,600</u> sq. ft.*
	Total	40,100 sq. ft.*

*Includes a total of 3,900 sq. ft. of basement storage space.

SOURCE: M and T Properties

Assessor's Block 230, directly north of the site, is occupied by One Embarcadero Center, a 45-story (567 ft.) office building with 3 levels of



▲ ▲
335-337 353
Sacramento Street

▲
280 Battery
Street

A. View from the northwest corner of Sacramento and Battery Streets.



▲
280 Battery Street

▲
240-248 Battery Street
(Stone Soup)

▲
Halleck Street

B. View from Halleck and Battery Streets east to the site.
One Embarcadero Center is in the background.

FIGURE 11: Views of the Existing Site

III. Environmental Setting

retail uses. Two and Three Embarcadero Center (31-story, 414 ft. each) are northeast of the site on Assessor's Blocks 231 and 232. Assessor's Block 236 to the east of the project site is occupied by 1- to 7-story office and retail structures, and, on the eastern half of the block, the 14-story (190 ft.) 100 California St. office building. The block southeast of the site (Assessor's Block 263) is occupied by 5 structures ranging from 2 to 9 stories, and a 1-story parking structure; a vacant lot on Pine St. is also used for parking. The northeast portion of the block is vacant and fenced.

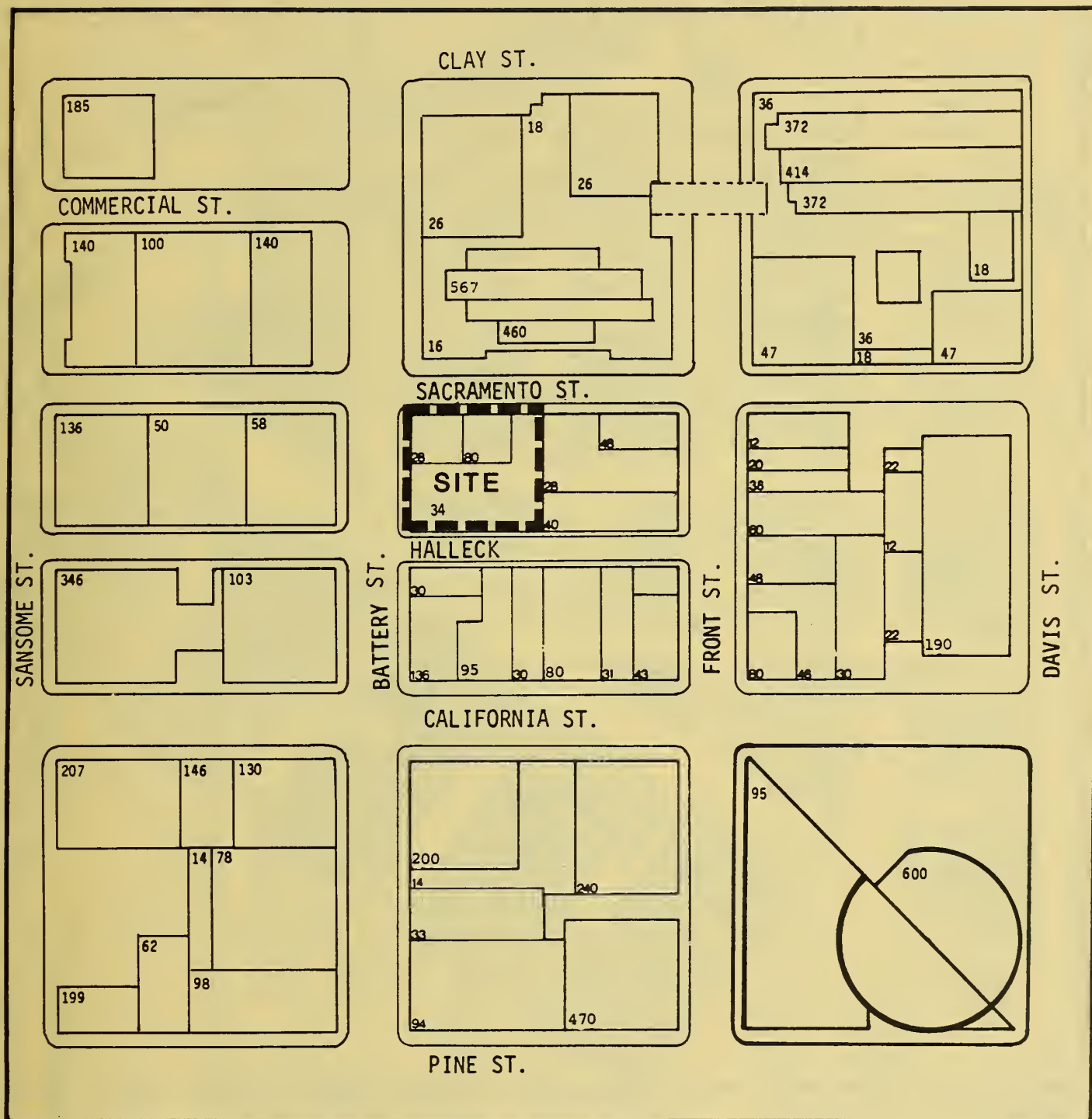
The 33-story (470 ft.) 100 Pine St. building, completed in 1972; the 14-story (200 ft.) Industrial Indemnity Company building at California and Battery Sts., completed in 1960; a 7-story office structure at Pine and Battery Sts., completed in 1957; and the 17-story (240 ft.) 201 California St. building occupy Assessor's Block 262, south of the project site.

Southwest of the site, on Assessor's Block 261, are pre-1950 retail and office structures ranging from 6 to 10 stories. The block west of the site (Assessor's Block 238) also includes older commercial and office structures, as well as the California First Bank headquarters, a 23-story, 325 ft. structure, at Sansome and California Sts., completed in 1977.

- Assessor's Block 229, northwest of the site, is occupied by the 10-story, 350 Sansome St. building at Sacramento St., and the Federal Reserve Bank of San Francisco which is currently planning to construct new headquarters at Market and Spear Sts. (see Final EIR, Federal Reserve Bank of San Francisco, EE 78.207, certified 14 June 1979). Existing building heights on the site and vicinity are shown in Figure 11a and existing land uses in Figure 12, p. 20.

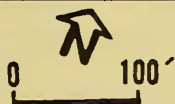
ZONING

The City Planning Code zoning classification for the project site is C-3-0, Downtown Office District (see Figure 13, p. 21). Office and retail uses are permitted in this District with a permitted Basic Floor Area Ratio of 14 to 1, i.e., buildings may have a floor area up to 14 times the area of the site. The site is also in the 450-I Height and Bulk District (see Figure 14, p. 22)

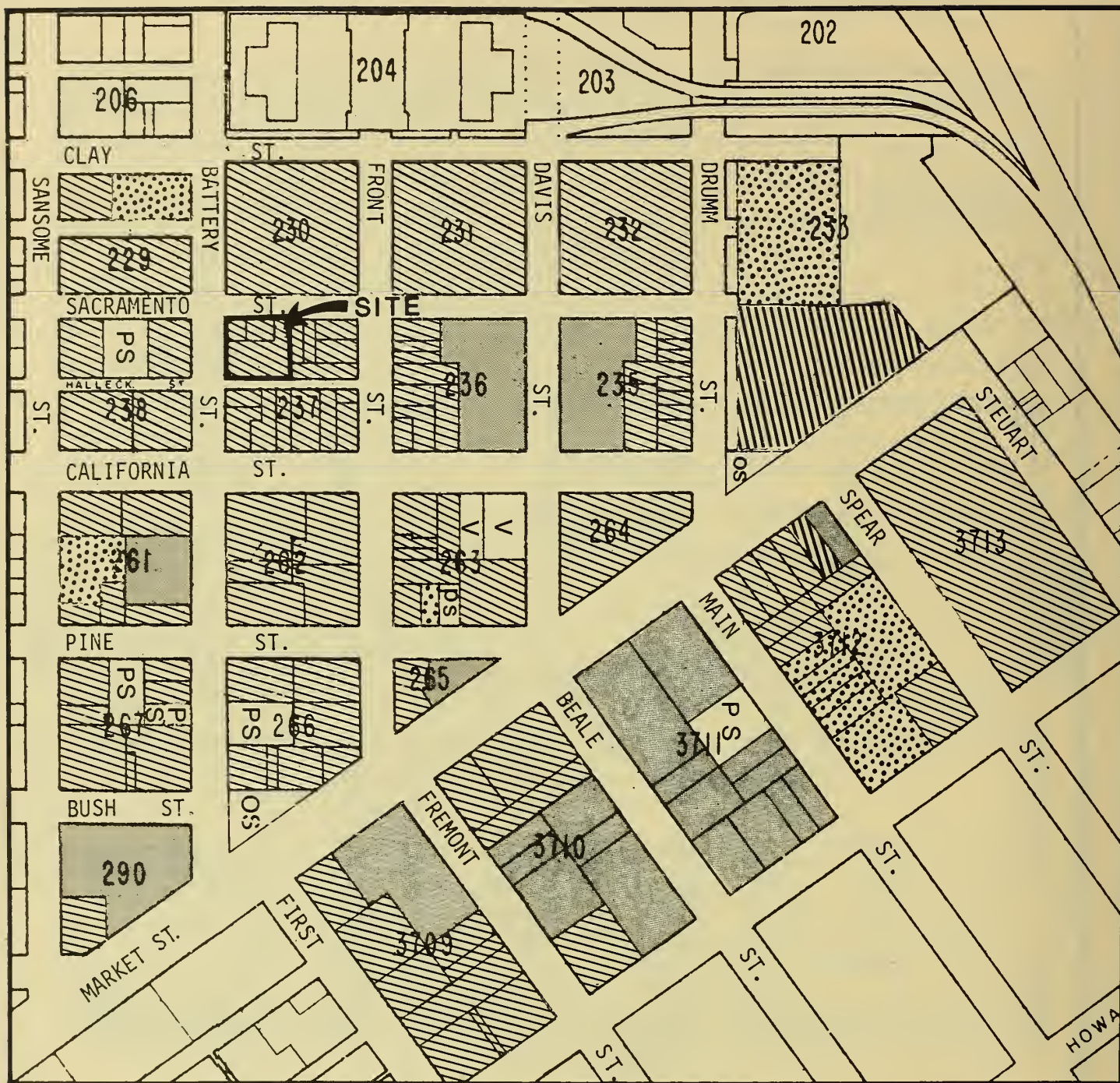


LEGEND

00 Building Heights
in Feet



● FIGURE 11a: BUILDING HEIGHTS IN
PROJECT VICINITY



LEGEND

-  HOTEL
-  OFFICE WITH GROUND FLOOR RETAIL
-  OFFICE
-  PARKING STRUCTURE
-  PARKING LOT
-  VACANT
-  OPEN SPACE

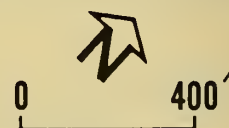
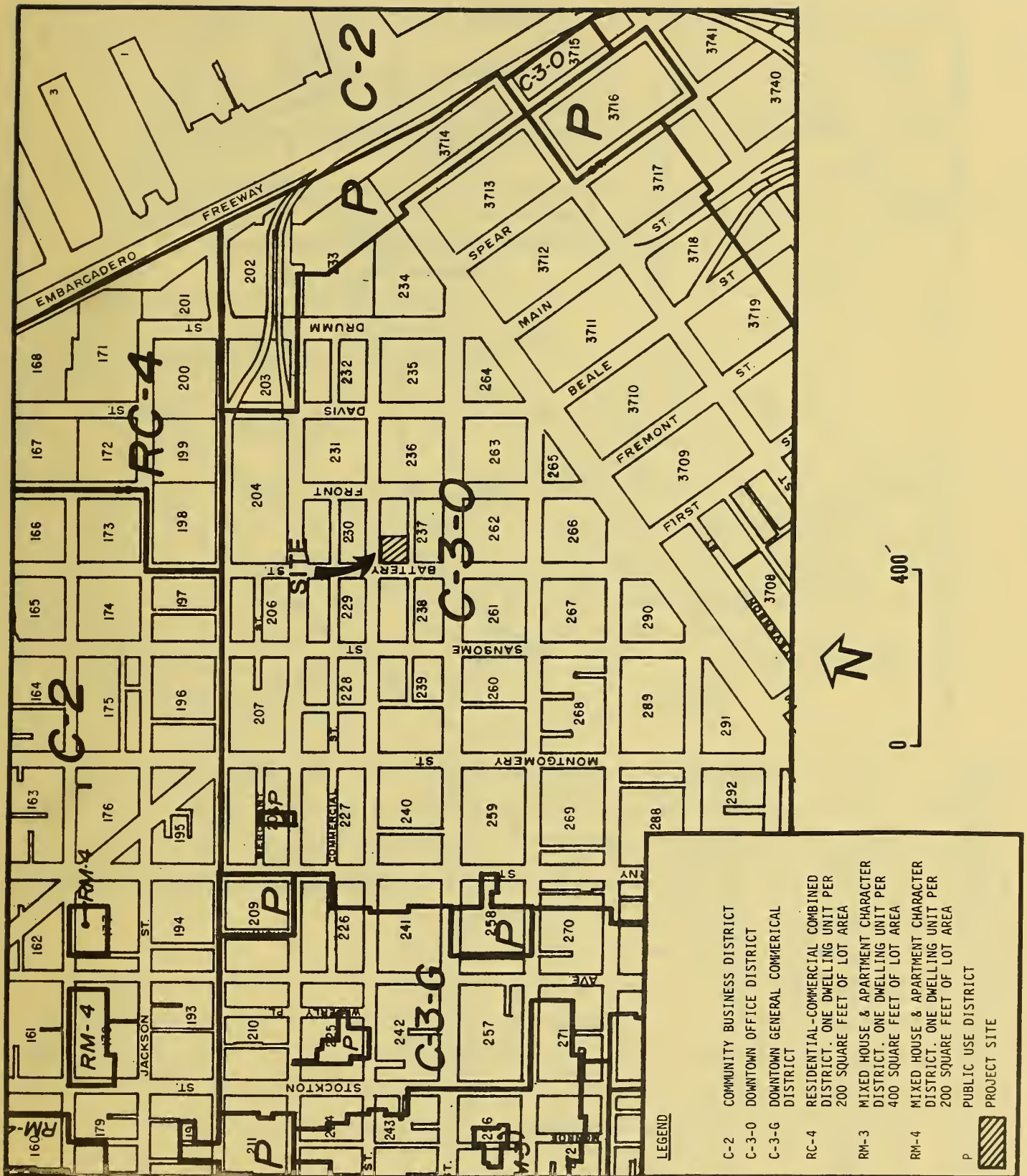
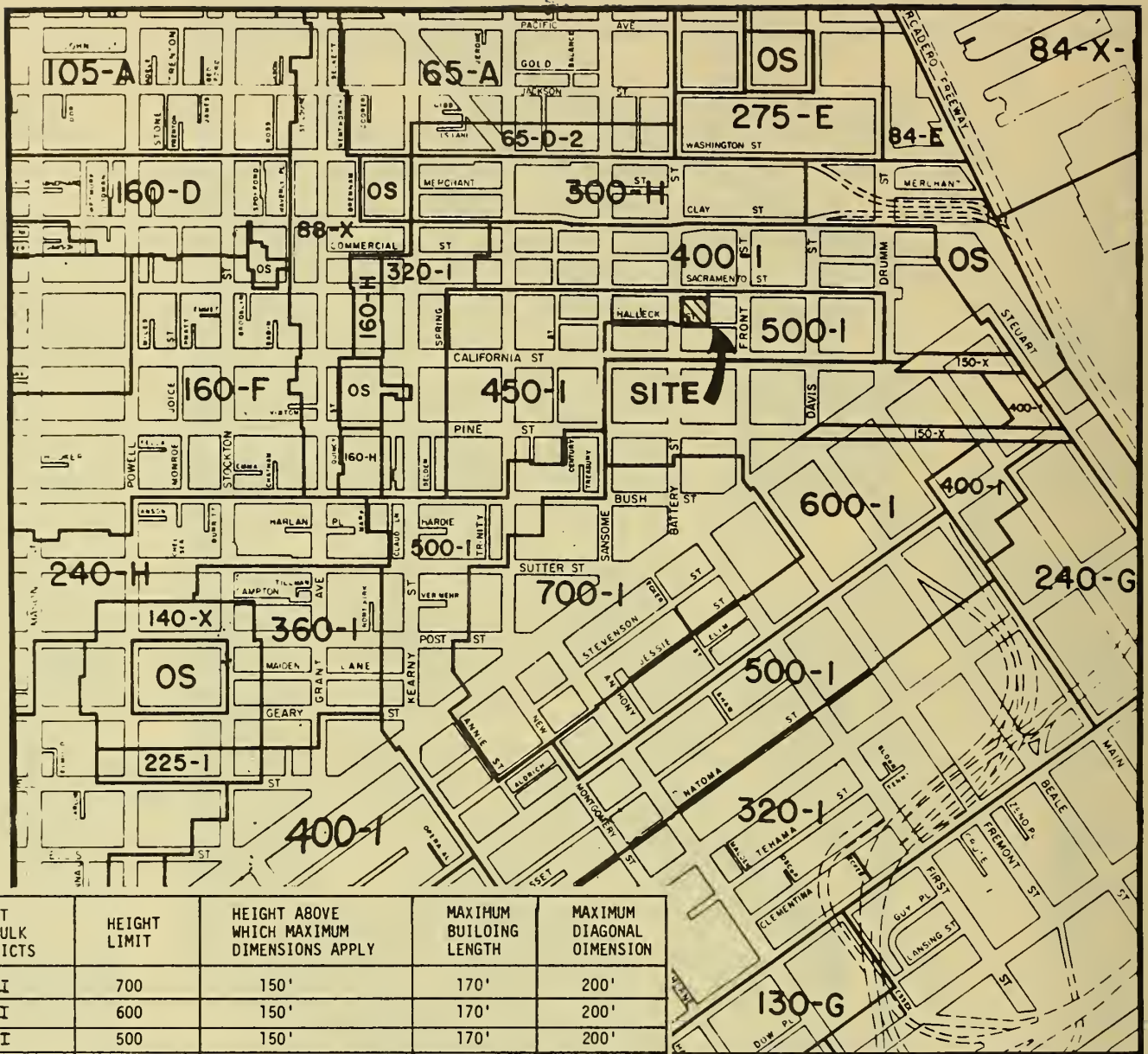


FIGURE 12: EXISTING LAND USE ON THE SITE AND IN THE VICINITY



SOURCE: San Francisco Municipal Code

FIGURE 13: EXISTING PLANNING CODE USE DISTRICTS



HEIGHT AND BULK DISTRICTS	HEIGHT LIMIT	HEIGHT ABOVE WHICH MAXIMUM DIMENSIONS APPLY	MAXIMUM BUILDING LENGTH	MAXIMUM DIAGONAL DIMENSION
700-I	700	150'	170'	200'
600-I	600	150'	170'	200'
500-I	500	150'	170'	200'
450-I	450	150'	170'	200'
400-I	400	150'	170'	200'
360-I	360	150'	170'	200'
320-I	320	150'	170'	200'
300-H	300	100'	170'	200'
275-E	275	65'	110'	140'
240-H	240	100'	170'	200'
240-G	240	100'	170'	200'
225-I	225	150'	170'	200'
160-D	160	110'	140'	140'
160-H	160	100'	170'	200'
160-F	160	80'	170'	200'
150-X	150	BULK LIMITS NOT APPLICABLE		
140-X	160	100'	170'	200'
130-G	130	80'	170'	200'
105-A	105	40'	110'	125'
88-X	88	BULK LIMITS NOT APPLICABLE		
84-E	84	65'	110'	140'
65-0-2	65	40'	110'	140'
65-A	65	40'	110'	125'
05		CONFORMITY WITH OBJECTIVES, PRINCIPLES AND POLICIES OF THE MASTER PLAN.		



FIGURE 14: EXISTING PLANNING CODE HEIGHT AND BULK DISTRICTS

III. Environmental Setting

in which the maximum permitted height is 450 ft. Above a height of 150 ft., the maximum permitted building length is 170 ft., and the maximum permitted diagonal dimension is 200 ft.

No off-street parking is required in the C-3-0 district; however, a maximum of 7% of the gross floor area may be allocated for parking.

B. URBAN DESIGN AND VISUAL ASPECTS

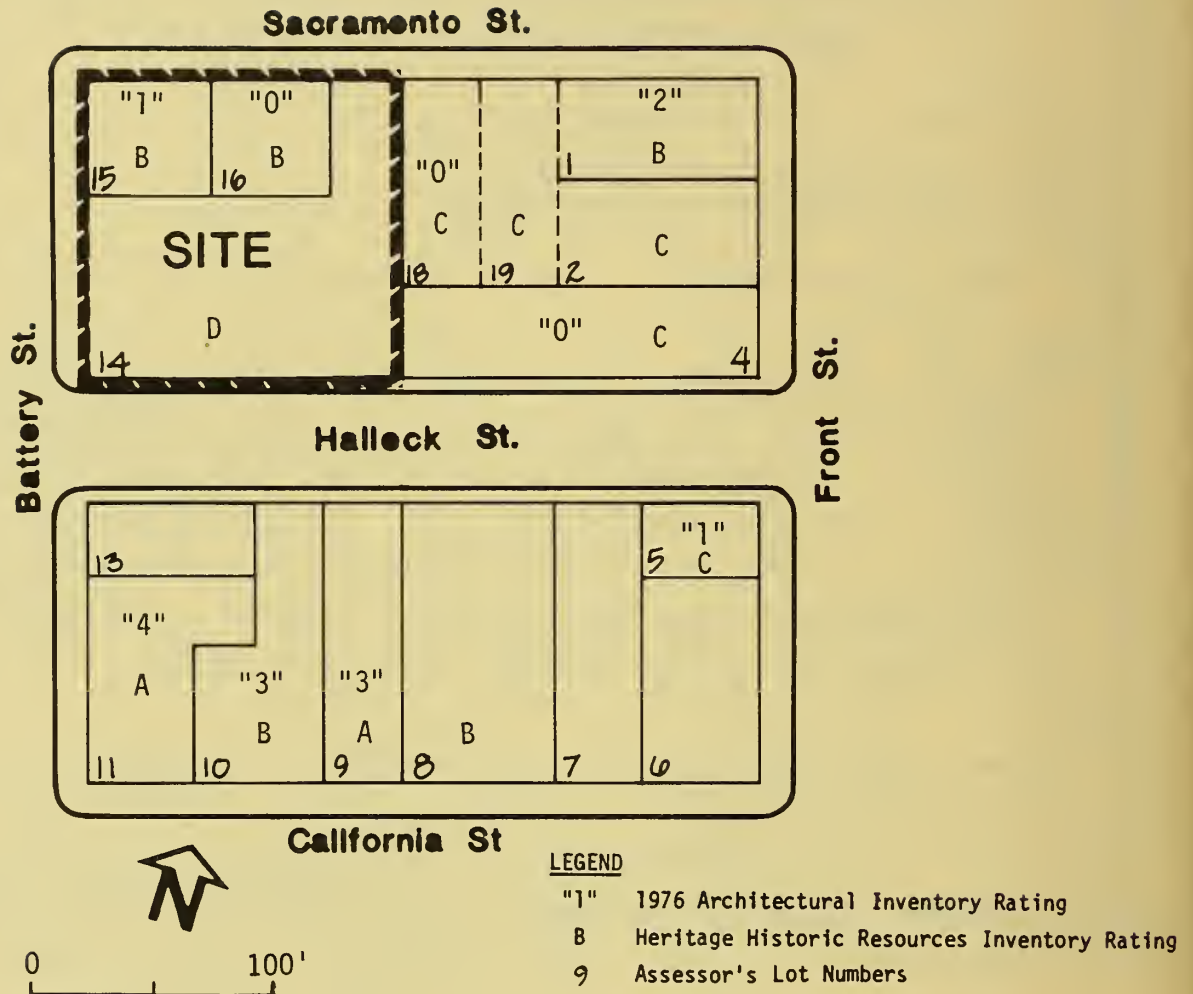
ARCHITECTURAL RESOURCES

Two of the 3 buildings on the project site are noted in the parcel-by-parcel citywide inventory of architecturally significant buildings conducted by the Department of City Planning (Map titled 1976 Architectural Inventory) in 1974, 1975, and 1976 (see Appendix A, p. 137). The 2-story building at 280 Battery St. (Lot 15, Block 237) is rated "1", and the 6-story building at 353 Sacramento St. (Lot 16, Block 237) is rated "0". The ratings of "0" and "1" are the lowest in the Inventory scale of "0" to "5".

The Foundation for San Francisco's Architectural Heritage has completed an architectural survey and historic resources inventory (The Foundation for San Francisco's Architectural Heritage, 1979, Splendid Survivors, San Francisco's Downtown Architectural Heritage) rating all downtown buildings from "A" to "D" (see Appendix B, p. 138). The 2 buildings on the project site which are included in the 1976 Architectural Inventory of the Department of City Planning are rated as "B" in the Heritage survey, a rating which indicates an "important landmark of National Register quality . . . eligible for the State Inventory (of Architectural Resources) and possibly City landmark status". See Figure 15 for the locations of the buildings on the block which are included in the 1976 Architectural Inventory and the Heritage Architectural Survey.

The building at 280 Battery St. was built in 1908 for the White Investment Company. It was designed by Lewis P. Hobart, a well known San Francisco architect. It is a brick building with concrete supports, and is surfaced

III. Environmental Setting



III. Environmental Setting

- The 6-story building at 353 Sacramento St. was built in 1922 for H. & W. Pierce, Inc. It was designed by B. G. McDougall. It has a steel frame and reinforced concrete floors and roof, and a gray brick curtain wall facade. The original appearance of the building, including the entrance to the office lobby, has not been changed.

The "D"-rated 2-story building at 248 Battery St., designed by B.G. McDougall, was built in 1920. It also fronts on Halleck St. and on Sacramento St. at Nos. 335-337. The building is a brick structure with wood posts.

- One Embarcadero Center, opposite the site on Sacramento St., was not rated in the Heritage survey. The old Federal Reserve Bank, diagonally opposite the site at the northwest corner of Battery and Sacramento Sts. was rated "B". The building at 241 Battery St., opposite the site, was also rated "B". The building at the northwest corner of Battery and California Sts. was not rated by Heritage. The Newhall Bldg., at the northeast corner of California and Battery Sts. was designed by Lewis Hobart in 1910 and was expanded in 1917. Rated "A" by Heritage, it is described by Heritage as "an extremely important element on California St."

NOTE - Urban Design and Visual Aspects

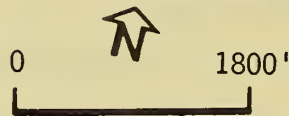
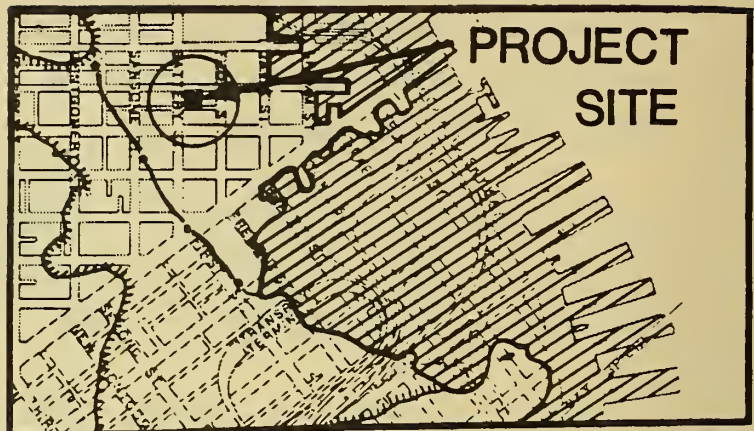
/1/ A frieze is a sculptured or ornamental band on a building; a cartouche is an oval or oblong figure. A cornice is a projecting horizontal member or top course that crowns an architectural wall.

C. CULTURAL AND HISTORIC ASPECTS

- The project site was once part of Yerba Buena Cove, a bight used for anchorage of occasional ships in the early 19th century, and the anchorage place for hundreds of ships in the Gold Rush. A map of San Francisco dated 1849-50 shows the original shoreline crossing California St. on the west side of Sansome St. and Halleck and Sacramento Sts. at Leidesdorff St (San Francisco in 1849-50, Map F869.53, 1849-50; B2, Bancroft Library, University of California at Berkeley). The California St. Wharf extended eastward from Sansome St. to approximately Battery St. According to a member of the

LEGEND

-  Former bay & creek, now artificially filled
-  Limit of artificial fill on land areas
-  1849 Shoreline
-  1853 Shoreline



Source - Schlocker, J., 1974, Geology of the San Francisco North Quadrangle, California, Professional Paper 782, USGS, Washington, D.C.

FIGURE 16: SHORELINE OF SAN FRANCISCO IN 1849, 1853, and 1979

Landmarks Preservation Advisory Board, Howison's Pier on the line of Sacramento St. was filled by 1851. Filling of the cove was rapid following the gold rush of 1849. The U.S. Coast Survey of 1853 shows the project site and the area in its vicinity completely filled to what is now The Embarcadero (see Figure 16). Many ships which were anchored in the cove during the early months of the gold rush were abandoned for shipping purposes and were converted to stores and hotels. Some of the later fill covered some of the ships which had been dismantled and broken up. A map prepared by, and on file at, the National Maritime Museum of San Francisco shows 1 such ship east of the project site at the southwest corner of Sacramento and Front Sts. but none on the project site (Gold Rush Vessels Beached, Scuttled and Broken Up, 1963, San Francisco Maritime Museum). The ship was the Thomas Bennett, which was used as a storeship and grocery store before the block was completely filled in. The data on the map are qualified as shown in the legend of the map. The map is the best guide, however, to the probability of ships being at the locations shown (Harlan Soeten, Curator, National Maritime Museum of San Francisco, personal communication, 27 February 1979).

III. Environmental Setting

Early buildings on the project site were damaged or destroyed in the 1906 earthquake and fire; rebuilding on the project site occurred between 1908 and 1922 (see Section III.B, p. 23, for a description of the buildings presently on the site).

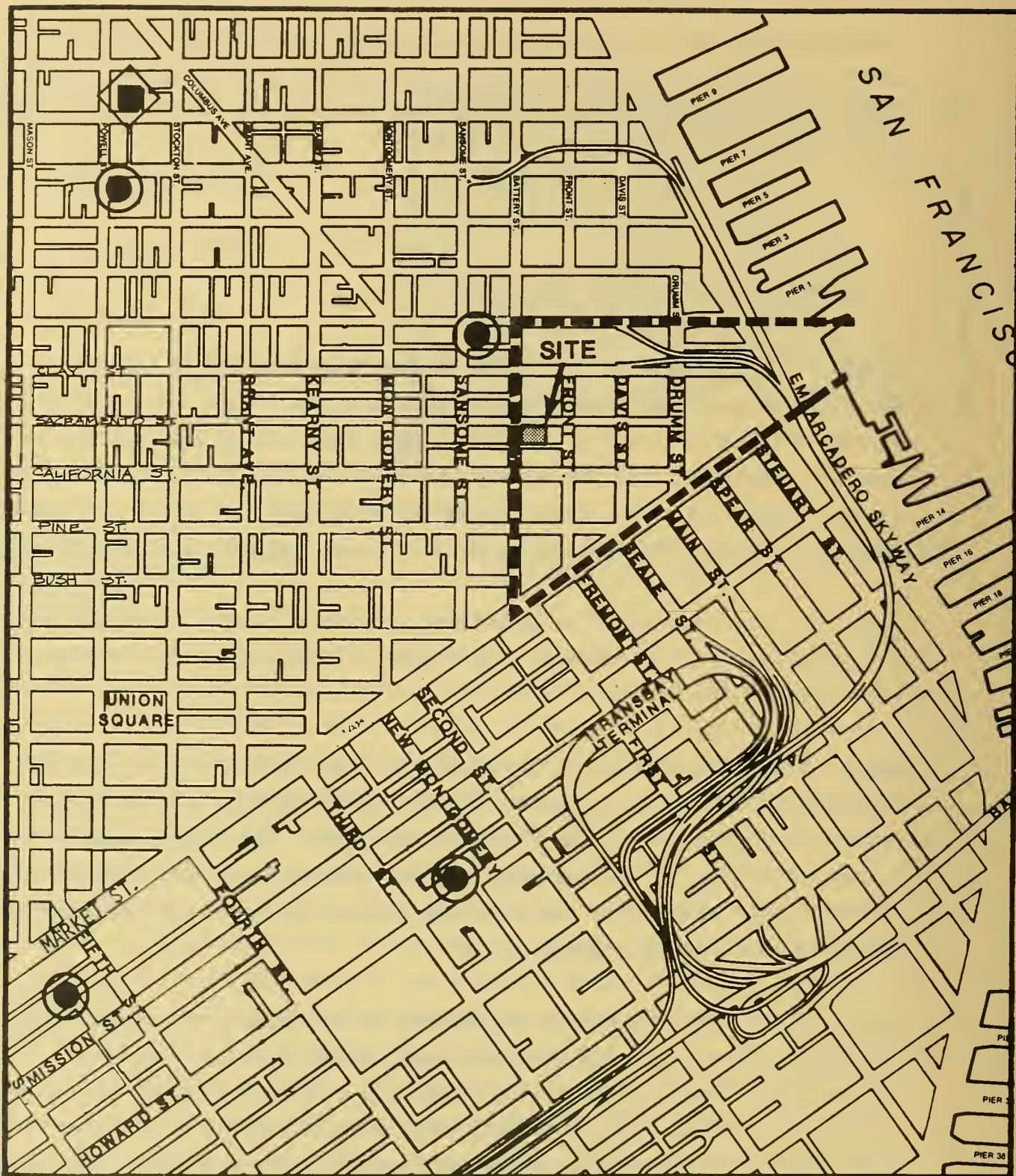
D. COMMUNITY SERVICES AND UTILITIES

Police. The project site is located in Reporting Area 344 in the San Francisco Police Department's Central District (see Figure 17). A police car patrols the project vicinity 24 hours a day; there are no foot patrols in the area./1/ Reporting Area 344 logged a total of 700 incidents, including 38 violent crimes, in 1978. Auto-related thefts account for 50% of all reported thefts in the area./2/ Data indicate a 7% crime increase from 1977 to 1978.

Fire. The San Francisco Fire Department provides fire protection services. All companies of first response (see Figure 17) respond to the vicinity of the site within 4 minutes./3/

Water. Water is provided for San Francisco from the Hetch Hetchy and San Francisco Water Department system via the Crystal Springs and San Andreas Reservoirs located on the San Francisco Peninsula. The project area is served by the 141-million gallon capacity University Mound Reservoir. Eight-inch diameter water mains serve the site from Battery St. and 6-inch diameter mains serve the site from Sacramento St./4/

Sewer. The Bureau of Sanitary Engineering of the Department of Public Works provides combined storm and sanitary sewer service for San Francisco. Wastewater from the site currently flows into a 12-inch diameter main under Battery St. connecting to an 18-inch main under Sacramento St./5/ The North Point Water Pollution Control Plant receives dry and wet weather flows from the project area. Storm flows resulting from rainfall in excess of approximately 0.02 inches per hour exceed the design capacity of the plant and are discharged directly into the Bay. Projects to reduce these overflows are currently under design and construction./6/



LEGEND

- DAON BUILDING SITE
- CENTRAL POLICE STATION
- POLICE STATISTICAL REPORTING AREA 344
- FIRE STATIONS - FIRST ALARM RESPONSE

FIGURE 17: POLICE AND FIRE STATIONS SERVING THE PROJECT SITE

III. Environmental Setting

Solid Waste. Domestic solid wastes are collected from the site by the Golden Gate Disposal Company. Wastes are taken to a transfer station north of Brisbane and then transported to a landfill site at the Mountain View Shoreline Regional Park. The current contract provides for use by the City through 1983./7/

Telephone. Full telephone service is provided to the site by Pacific Telephone and Telegraph (PT&T) Company through an underground system./8/

NOTES - Community Services and Utilities

/1/ Captain G. D'Arcy, Commanding Officer Central District Station, Police Department, letter communication, 16 February 1979. This letter is available for public review at the Department of City Planning, Office of Environmental Review.

/2/ Officer J. Farrell, Crime Analysis Division, Police Department, telephone communication, 15 March 1979.

/3/ Chief W. Graham, Fire Marshal, Fire Department, letter communication, 12 February 1979. This letter is available for public review at the Department of City Planning, Office of Environmental Review.

/4/ J. Kenck, Manager, City Distribution Division, Water Department, letter communication, 26 February 1979. This letter is available for public review at the Department of City Planning, Office of Environmental Review.

/5/ J. Walsh, Investigation Section, Bureau of Sanitary Engineering, telephone communication, 20 March 1979.

/6/ M. Francies, Investigation Section, Bureau of Sanitary Engineering, telephone communication, 21 February 1979.

/7/ F. Garbarino, Office Manager, Golden Gate Disposal Company, telephone communication, 20 April 1979.

/8/ W. Ottens, Engineer, Pacific Telephone and Telegraph Company, telephone communication, 8 March 1979.

E. ECONOMIC ASPECTS

BLOCK 237, THE PROJECT SITE

Office and Retail Space. The project site presently contains 11 commercial establishments, occupying about 36,200 net sq. ft. in 3 structures ranging

III. Environmental Setting

from 2 to 6 stories. All buildings are fully occupied; an additional 3,900 net sq. ft. of space is partially used for storage. Annual average rents on the site range from \$12 to \$15 per ft. for retail space and \$8 to \$10 per sq. ft. for office space. See Appendix D, Table D-1, p. 151, for a detailed list of current occupancy. In summary, usage is as shown in Table 3.

TABLE 3: EXISTING NET LEASABLE COMMERCIAL FLOOR AREA AT THE SITE (Sq. Ft.)

	240-248 Battery St.* (Lot 14)	280 Battery St. (Lot 15)	353 Sacramento St. (Lot 16)	Total	Percent
Office	11,700	2,500	11,700	25,900	72
Retail/Rest.	10,000**	300	0	10,300	28
	<u>21,700</u>	<u>2,800</u>	<u>11,700</u>	<u>36,200***</u>	<u>100</u>

* Includes 335-337 Sacramento St.

** Includes 3000 sq. ft. ground-level retail temporarily in office use.

***3,900 sq. ft. of basement storage space not included.

SOURCE: M and T Properties

Employment and Tenant Mix. Business establishments at the project site provide employment for about 220 persons. The majority (about 65%) are employed by M. Arthur Gensler, Jr. and Associates, an architectural firm. Other office tenants include 3 real estate companies and 2 law firms, employing a total of about 32 persons. Four ground-floor retail and restaurant establishments, including Stone Soup, employ an estimated 46 persons. (See Appendix D, Table D-1, p. 151, central columns).

● Secondary Income Effects. Secondary employment and income effects result from persons employed at the project site because each employed person generates additional employment opportunities and income by his or her demands for goods and services. Previous studies have indicated that San Francisco resident employees spend 80% of their disposable income in the City, creating secondary income and employment. Based on an April 1980 survey of businesses at the Daon site, an estimated 65% or about 140 of the employees at the project site are San Francisco residents, generating an estimated \$1.2 million of secondary income in San Francisco each year (based on an average annual disposable income of about \$15,000 minus 25% gross taxable income for office workers and \$10,000 minus 22% gross taxable income for retail and maintenance workers).

III. Environmental Setting

Fiscal: Existing Assessed Valuation and Property Taxes (Block 237). The 1979-80 assessed value of the 3 parcels in Block 237 which constitute the project site totals about \$385,600; \$251,500 is in land value and \$134,100 is in improvements. At the 1979-80 composite tax rate of \$4.97 per \$100 assessed value, the site will generate \$19,100 in property taxes this fiscal year. These revenues will be distributed as shown in Appendix E, Table E-1, p. 156.

Fiscal: Other Costs and Revenues. Based on the average gross receipts of \$100 per net sq. ft. for retail/restaurant space/1/, the existing 10,300 net sq. ft. of retail uses in the block generated an estimated \$66,700 in 1978-79 in sales tax revenues (6.5% of about \$1 million in gross receipts): the State received about \$48,700; the City and County of San Francisco, \$12,700; and BART, \$5,300. The estimated 1978-79 revenues from payroll expense or business taxes were on the order of \$22,300./2/

Fiscal: Existing Costs and Net Revenue. The City and County currently incurs some costs to provide services to the site, such as fire and police protection, street lighting and cleaning, and street and storm drain maintenance. According to R. Evans, the Assistant Director of the Department of Public Works, these costs cannot be reliably quantified for individual office sites in San Francisco./3/ Revenues generated to the City and County from the site to offset costs include property tax (\$16,300), sales tax (\$12,700) and business or payroll tax (\$22,600), less public expenditures, are estimated to exceed costs for police, fire, water, sewer, street maintenance and general administrative services.

DOWNTOWN AND REGIONAL SETTING

● Existing and Proposed Office Space, Downtown Business District. San Francisco has about 56 million gross sq. ft. of office space./4/ Almost half of this space is in 64 major office buildings, with a height of 10 stories (118 ft.) or more, built in the Downtown business district in the 32-year period since 1948. About half of the total post-World War II high-rise office space, 15 million sq. ft. out of 28 million sq. ft., was constructed from 1970 through 1979 in 24 structures; another 1.7 million sq. ft. of high-rise office space will be completed by the end of 1980 in 5 structures. Five additional office buildings are under construction now, and another 4 buildings, including the

III. Environmental Setting

project, have been formally applied for or are expected to be proposed and are in the process of environmental impact report preparation. If all were to be constructed, these 9 buildings would add about 5.7 million gross sq. ft. to existing Downtown high-rise office space, an increase of 19% over existing high-rise office space including the 1.7 million sq. ft. to be completed in 1980, and an increase of 10% over total existing office space (see Appendix E, Table E-2, p. 157).

Vacancy Rates and Absorption. A shortage of office space currently exists in San Francisco. As of mid-1978, the office vacancy rate of 8.9% citywide/5/ and about 1.0% in new Downtown high-rise buildings built from 1970-77/5/ was among the lowest in the nation. It is expected that the buildings now under construction and due for completion in 1980 will be readily rented due to existing demand./7/ The majority of the space is to be leased on the open market. One effect of the office space shortage in San Francisco has been to stimulate office development elsewhere in the Bay Area. San Mateo and Contra Costa Counties, in particular, are experiencing demand not only from expanding local businesses, but also from San Francisco relocations./8/

Rents./9/ Office rents have increased sharply in the past 2 years as the demand for office space has exceeded the City and regional supply, and as land and energy costs have escalated. High-quality, new space leases for \$12 to \$25 per sq. ft. annually. Somewhat older Downtown buildings lease for \$11 to \$12 per sq. ft. annually. In contrast, San Francisco offices not located Downtown and offices in the suburbs lease for \$7 to \$9, and rents in unrenovated pre-World War II buildings are around \$6 per sq. ft. annually. If renovated, pre-war buildings rent at \$8 to \$9 per sq. ft.

NOTES - Economic Aspects

/1/ C. Nicholas, Former Director of Retail Leasing, Cushman and Wakefield, telephone communication, 19 April 1979.

/2/ An explanation of San Francisco's business taxes excerpted from San Francisco Planning and Urban Renewal Association, June, 1975, Detailed Findings; Impact of Intensive, High-Rise Development in San Francisco, Final Report, p. 146-147, is available at the Office of Environmental Review, Department of City Planning. The payroll tax rate is now 1.1%. Banks and insurance companies are exempt. The estimated business tax revenue of \$22,600 is based on \$21,600 from payroll expense tax and \$1,000 from gross receipts tax. Assumptions:

III. Environmental Setting

Payroll Expense Tax: 218 office employees (many self-employed) at an estimated average salary of \$15,000 for total office payroll of \$3.3 million; 60% eligible for tax, tax rate of 1.1%.

Gross Receipts Tax: \$1.5 million gross receipts in retail/restaurant space; tax rate of \$1 per \$1,000 (Class 08).

/3/ R. Evans, Assistant Director of Public Works, telephone communication, 27 April 1979.

/4/ The 56 million sq. ft. estimate of existing inventory is based upon the 50 million sq. ft. enumerated in a 1974 SPUR-sponsored survey (made as background for the analysis of high-rise development cited in Note 2) plus the 6 million sq. ft. of high-rise office space in 9 buildings completed from 1976 to 1979.

/5/ Security Pacific Bank, 30 June 1978, Northern Coastal Monthly Summary of Business Conditions. The article states that 1.3 million sq. ft. came on line in 1977, of which a large proportion is already occupied. A copy of this article is available for public review at the Department of City Planning, Office of Environmental Review.

/6/ N. Spencer, Senior Sales Consultant, Coldwell Banker, personal communication, 29 November 1978.

/7/ Security Pacific Bank, op. cit.

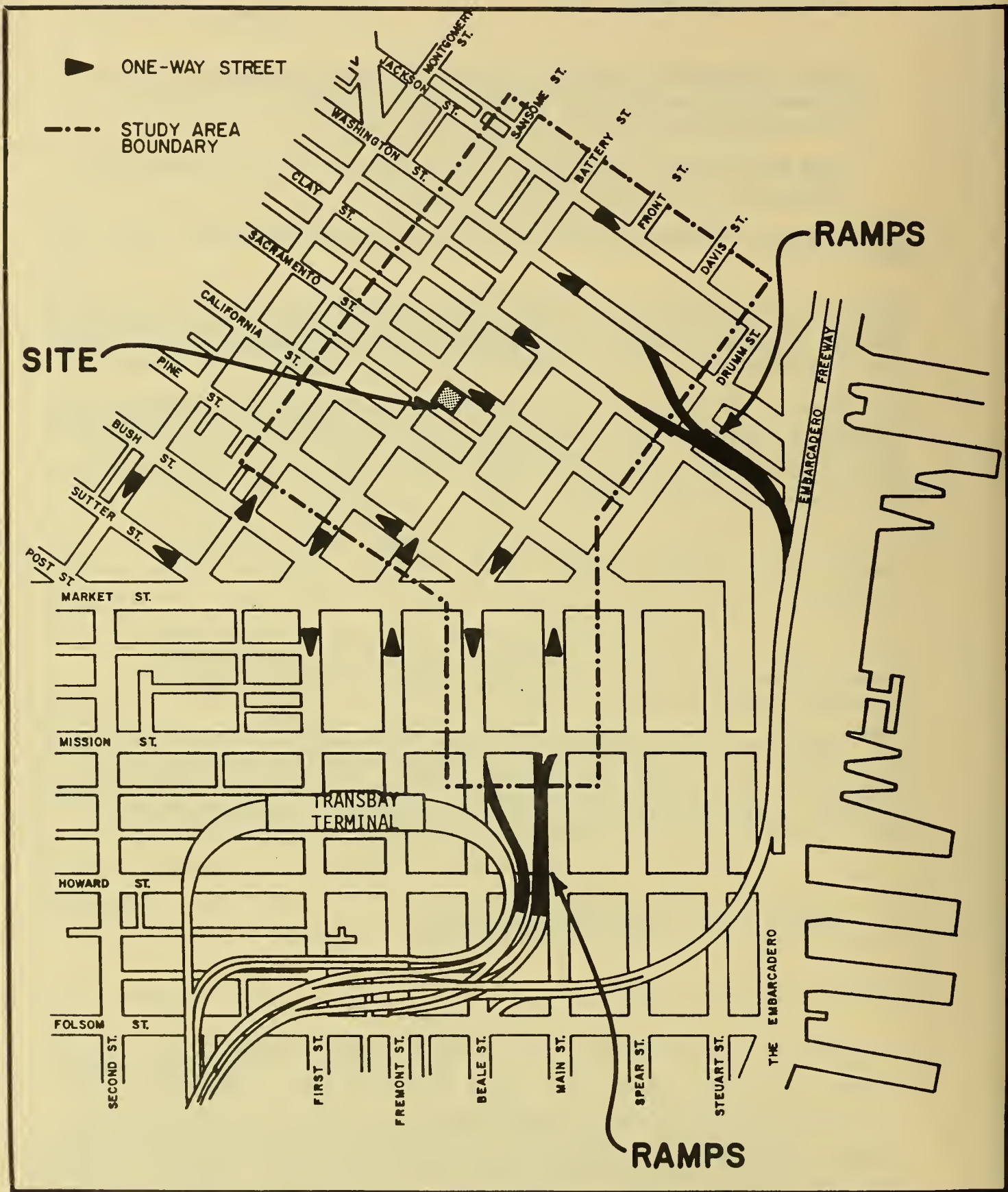
/8/ N. Spencer, Senior Sales Consultant, Coldwell Banker, telephone communication, 7 May 1979, and J. Weil, Leasing Agent, Grubb and Ellis, telephone communication, 8 May 1979.

/9/ Information in this paragraph is based upon telephone communications with D. Bixby, Vice President, Milton Meyer & Co., 12 October 1978, with N. Spencer, Senior Sales Consultant, Coldwell Banker, 16 October 1978, and upon a personal communication with J. Stanisch, Senior Real Property Appraiser, Assessor's Office, City and County of San Francisco, 17 October 1978.

F. TRANSPORTATION, CIRCULATION AND PARKING

STREET AND FREEWAY SYSTEM

The site is served by a grid of local streets and by portions of the regional freeway system (see Figure 18). Access to the freeways connecting with the East Bay, San Francisco International Airport, and Peninsula is provided by pairs of ramps 800 ft. northeast of the project site and 1,500 ft. south of the site. The intersection of Battery and Sacramento Sts., adjacent to the site, is controlled by a traffic signal. Halleck St. at Battery St. is not controlled by any standard traffic control device.



SOURCE: TJKM

FIGURE 18: STREET SYSTEM AND FREEWAY RAMPS

III. Environmental Setting

The site is within the Downtown Core automobile control area designated in the Transportation Plan for Downtown and Vicinity (San Francisco Planning Commission, Resolution 6834, 27 April 1972, Map A). This area is described in the Plan as "that intensely populated area which functions as a financial, administrative, shopping and entertainment center where priority must be given to the efficient and pleasant movement of business clients, shoppers and visitors; where a continuing effort should be made to improve pedestrian, transit and service vehicle access and circulation; where priority for the use of limited street and parking space within this core should be available for these functions; and where a continuing effort should be made to reduce the impact of the private commuter vehicle." The Revisions to the Transportation Element of the Master Plan Regarding Parking (City Planning Commission Resolution 7647, 20 January 1977), confirm the statement in the Plan for Transportation (1972) that "all additions to the commuter load as a result in job growth in the City should be made by public transit." In accordance with this statement, objectives and policies guiding and limiting the provision of parking are outlined in the revisions to the Downtown Transportation Plan and the Plan for Transportation.

Existing traffic volumes on nearby streets are shown in Table 4. A capacity analysis shows the intersections of Battery St. at Washington St. and Clay St. at Front St. and the Mission St. intersections with Main St. and Beale St. to be operating at Level of Service C or better. See Appendix F, Table F-1, p. 159, for definitions and volume-capacity ratios for each Level of Service, as well as an explanation of the capacity analysis. Table 5 shows the peak-hour volume-to-capacity ratios and the most heavily used approach to each intersection.

PARKING AVAILABILITY

A survey of existing long-term (greater than 6 hours), commercially available, off-street parking in the area bounded by The Embarcadero, Jackson St., Sansome St., and Market St. was made on the afternoons of Thursday and Monday, 1 and 5 June 1978 and Wednesday and Thursday, 20 and 28 September 1978 (see Figure 19). In this area there are 3,800 long-term, commercially available spaces of which 570 spaces are vacant on a daily basis. This is equivalent to an average occupancy of approximately 85%. There is no off-street parking on the site.

TABLE 4: 1978 VEHICLE TRAFFIC VOLUMES IN THE VICINITY OF PROJECT SITE

<u>Street</u>	<u>Section</u>	<u>24 Hour</u>	<u>Peak Hour*</u>	<u>Max. 8 Hours</u>
Beale	Market to Mission	8,000	980	4,800
Main	Mission to Market	13,400	1,520	7,980
Clay	Front to Davis	29,200	2,290	16,370
Washington	Off-ramp to Battery	15,600	1,970	9,380
Battery	Commercial to Sacramento	14,700	1,420	8,510

*The peak period is between 4:00 and 6:00 p.m., with the exception of Washington and Main Sts. where the peak period is between 7:00 and 9:00 a.m. The peak hour is the 1-hour during the peak period when traffic volumes are greatest.

SOURCE: See Appendix F., p. 158.

TABLE 5: 1978/1979 PEAK-HOUR VOLUME-TO-CAPACITY RATIO SUMMARY AT INTERSECTIONS IN THE VICINITY OF PROJECT SITE

<u>Intersection</u>	<u>v/c*</u> <u>Ratio</u>	<u>Critical Approach</u> <u>(Direction)</u>	<u>Level of Service**</u>
Clay and Front	0.64	Eastbound	B
Battery and Washington	0.65	Westbound	B
Mission and Beale	0.80	Eastbound	B
Mission and Main	0.83	Northbound	C

*v/c = existing volume/service volume ratio at Level of Service E.

** Levels of Service are defined in Table F-1, p. 159.

SOURCE: See Appendix F., p. 158, and Table F-1, p. 159.

There is a commercial/loading zone on the south side of Sacramento St. adjacent to the project site. The north side of Sacramento St. has 4 parking meters near its intersection with Battery St., the rest of the block is a

III. Environmental Setting

passenger loading zone. Battery St. adjacent to the project site has 2 parking meters on the east side and 5 meters on the west side, all of which are for commercial/loading until 1:00 p.m. The remainder of Battery St. between Sacramento and Halleck Sts. is a commercial/loading zone. The west side of Battery St. and both sides of Sacramento St. are towaway zones from 4:00 p.m. to 6:00 p.m. No parking is allowed on Halleck St.

PEDESTRIAN SETTING

The pedestrian flows on the sidewalks serving the project site were measured during the peak periods of 7:00 to 9:00 a.m. and 4:00 to 6:00 p.m. on Wednesday and Friday, 28 and 30 March 1979. The Level of Service for each of the sidewalks was calculated and is presented in Table 6. An explanation of the Level of Service scale is given in Appendix F, Table F-2, p. 160.

TABLE 6: 1979 WEEKDAY, 15-MINUTE PEAK PEDESTRIAN VOLUMES AT THE PROJECT SITE

Sidewalk	Effective Width*	Volume**		Rate***		Level of Service+	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
Battery	10 ft.	370	330	2	2	A	A
Sacramento	5 ft.	80	80	1	1	A	A

*Effective widths take account of poles, planter boxes, people standing at store windows, etc.

**Pedestrians per 15 minutes.

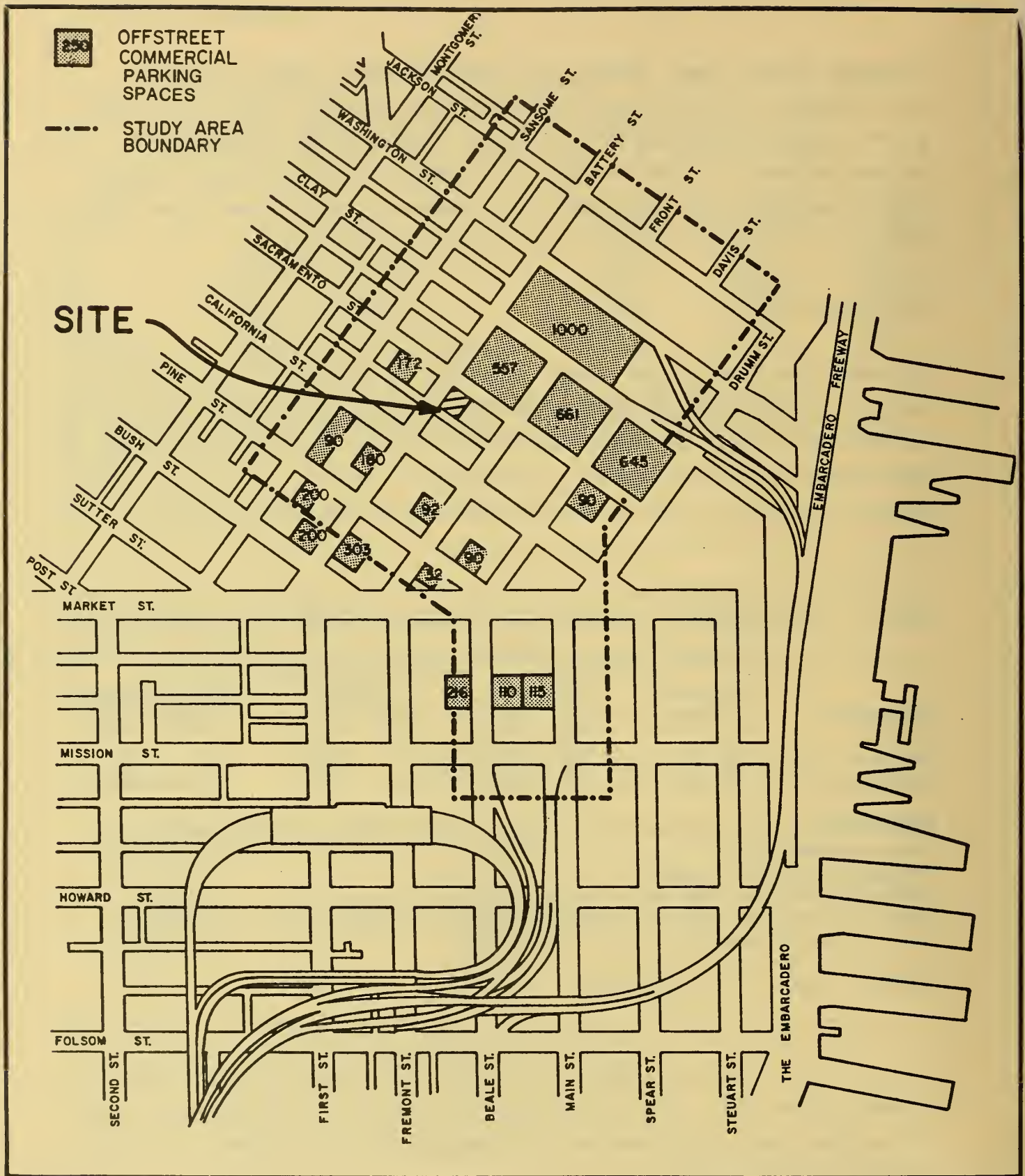
***Pedestrians per foot of sidewalk width per minute.

+Level of Service is measured at mid-block. For definition of Levels of Service, see Appendix F, Table F-2, p. 160.

SOURCE: TJKM, Traffic Engineers.

During the peak periods, pedestrian activity around the site is directed primarily from transit and parking facilities in the morning and toward them in the afternoon. The sidewalks on the project site are currently operating at Level of Service A.

The crosswalk volumes were measured during the same time periods the sidewalk analysis was conducted. The southern crosswalk across Battery St. was



SOURCE: TJKM

FIGURE 19: PARKING SURVEY BOUNDARIES AND RESULTS



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observed to carry 340 persons per hour during the morning peak and 350 persons per hour during the afternoon peak. The eastern crosswalk across Sacramento St. was observed to carry 1,040 persons and 1,070 persons per hour during the morning and afternoon peaks, respectively. The average pedestrian queue observed in the morning was 5 persons with a maximum of 11. The average afternoon queue was 8 persons with a maximum of 13. Many people were observed to cross both streets illegally.

TRANSIT SERVICE

The project site is served directly by 3 Muni electric trolley and motor coach lines providing radial service to and from the Downtown area, by the 5 light-rail vehicle lines (Muni Metro) which are expected to serve the Embarcadero Station effective in 1980, and by the California St. cable car line. Regional service is provided to the East Bay by the Bay Area Rapid Transit District (BART) from the Embarcadero Station, and by A-C Transit motor coaches from the Bay Bridge Transit Terminal on Mission St. between Fremont and First Sts. BART is planning to increase service before 1982 by operating directly between Richmond and Daly City (W. Belding, Senior Economics Analyst, BART, telephone communications, 17 October 1978).

Service to the Peninsula is provided by the Southern Pacific Transportation Company from a train terminal at Fourth and Townsend Sts., by the San Mateo County Transit District (SamTrans) which has bus routes and stops along various streets in the area, primarily on Mission St. west of First St., and by BART which effects transfers to SamTrans routes at the Daly City Station. The Golden Gate Bridge, Highway and Transportation District (Golden Gate Transit) provides peak-period service to Marin and Sonoma counties from stops on Battery St. and on Sansome St. 1 block west of the site, and ferry service to terminals in Larkspur and Sausalito from the Ferry Building. The Tiburon Ferry Service, operated by Harbor Carriers, Inc., also terminates at the Ferry Building.

Although not traditionally considered as transit, car pooling is becoming a substantial form of para-transit. Golden Gate Transit operates a van-pooling

III. Environmental Setting

program to areas not sufficiently close to the existing routes. The RIDES van- and car-pooling programs, operated under the auspices of a nonprofit, publicly funded corporation, provides consulting and matching services to help establish Bay Area van and car pools.

Muni and BART exceed their seated capacities during peak hours, but operate at less than 100% of total capacity (seated and standing) when ridership is averaged over a 1-hour period. During the peak of the peak, when ridership demand is most intense, demand on Muni and BART may exceed the total capacity of the available vehicles. This peak-of-the-peak condition on the Muni varies from line to line. The duration of jammed conditions on the more heavily used lines (J, K, L, M, N, 38, 55) may range from 15 to 30 minutes. The variable duration is caused by variations in day-to-day operating conditions which can cause bunching of transit vehicles. The BART peak-of-the-peak demand is fairly constant over a 30-to-40-minute period during which outbound trains are loaded in excess of seated capacity. Transit agencies other than Muni and BART operate at less than 100% of their seated capacities during a 1-hour peak period. Specific routes, however, were observed to experience peak-of-the-peak loadings in excess of seated capacity for periods of 5 to 30 minutes during the peak hour. Observations were made on Wednesday and Friday, 28 and 30 March 1979 and on Thursday, 5 April 1979. A line-by-line analysis available for public review at the Department of City Planning, Office of Environmental Review was verified by the observed conditions. The afternoon peak is more intense than the morning peak for most agencies. The existing characteristics of transit ridership on lines of each transit agency serving the project site are shown in Table 7.

G. AIR QUALITY

The Bay Area Air Quality Management District (BAAQMD; formerly the Bay Area Air Pollution Control District, BAAPCD) operates an air quality monitoring station approximately 1.5 miles to the southwest of the site. A 3-year summary of the data collected at this station and the corresponding air quality standards appear in Appendix G, Table G-1, p. 166.

TABLE 7: 1978 PEAK HOUR TRANSIT RIDERSHIP AND CAPACITY
(Selected Routes;* Peak Direction Only)

	Riders	Vehicles	Capacity++		% Occupancy		Peak
			Seated	Total	Seated	Total	
San Francisco Muni	13,560	213	10,460	16,670	124	81	p.m.
BART: Transbay	7,600	10**	6,700	10,040	113	76	p.m.
Westbay	5,900	9**	5,540	8,320	106	71	p.m.
A-C Transit	8,590	206	9,890	12,360	87	70	p.m.
SamTrans	610	15	800	980	77	63	p.m.
Southern Pacific RR	4,300	9***	11,000	11,000		39	p.m.
Golden Gate Transit							
Motor Coach	4,480	118	5,310	6,490	84	69	a.m.
Ferry	1,190	3	N.K.+	2,075		57	p.m.
Harbor Carriers, Inc.	345	2	N.K.+	700		49	p.m.

*Muni: J, K, L, M, N, 5, 6, 7, 8, 31, 38, 38LS, 38X, 41, 45, 61, 71, 72;

SamTrans: 7F, 7B, 5M, 7R; A-C Transit: A, B, BX, C, CH/CB, E, EX, F, FSG/FX, G, H, K, KH, L, LX, N, NX, Q, QX, R/RH, RD/RF/RCV, S, SW, V, W, Y.

**Number of trains: 10 cars on Concord lines; 7 cars on Fremont line.

***Number of trains assuming 10 cars per train to reflect available rolling stock.

+Not known.

++Capacity has been calculated based on the following per vehicle capacities.

	Seated Passengers	Total Seated and Standing Passengers
Muni: Streetcar	55	95
Trolley	51	75
Motor Coach	48	72
Cable Car	34	76
BART (per car)	72	108
A-C Transit	48	60
SamTrans	53	65
Southern Pacific (per car)	100/150	100/150
Golden Gate Transit Motor Coach	45	55
Sausalito Ferry		575
Larkspur Ferry		750
Harbor Carriers Tiburon Ferry		350

SOURCE: Field observations were made during the peak period on 25, 27 and 28 September 1978, 2 and 4 October 1978, 29 and 30 March 1979, and 5 April 1979, and publicly available data was supplied by the following agencies and personnel on the dates indicated:

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<u>Agency</u>	<u>Data</u>	<u>Personnel</u>	<u>Date</u>
Muni	Schedule Checks (Various weekdays; 14 March 1977; 24 and 28 March, 12, 17 and 26 April, 10 May, 26 June, 17 and 31 July, 31 August, 14 September 1978)	A. Figone, Transit Schedule Coordinator	2 October 1978
BART	Data Acquisition System (Tuesday, 18 April 1978)	W. Belding, Senior Economic Analyst	16 October 1978
A-C Transit	"Traffic Survey Series A-50", Institute of Transportation Studies (April 1978)		April 1978
SamTrans	Report of Weekly Operation (22 to 29 September 1978)	L. Stuek, Supervisor of Program Development	12 December 1978
Southern Pacific Railroad	Yearly Account, File Ap-191 (October 1976)	G. Pera, Manager - Commute Traffic	21 July 1977 19 June 1978
Golden Gate Transit	Monthly Reports (July and August 1978)	A. Zahradnik and P. Dyson, Trans- portation Planners	12 October 1978
Harbor Carriers, Inc.	Daily Reports (Friday, 6 October 1978)	Dispatcher	13 October 1978

San Francisco's air quality is the least degraded among the developed portions of the Bay Area. The prevailing westerly and northwesterly winds tend to carry pollutants from the City to the East Bay and South Bay. Annual fluctuations in air quality are due to a combination of meteorological factors, which vary unpredictably, and pollutant emissions, which have been decreasing in the Bay Area and are expected to continue to do so in the near future. Highest annual pollutant concentrations in San Francisco, while exhibiting alternating fluctuations due to meteorology, have shown an overall improvement during the 1971 - 1978 period. Annual numbers of violations of air quality standards, while exhibiting similar fluctuations, have not shown

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any clear overall trend during the same period. In 1978 a total of 10 violations of the ozone, carbon monoxide, nitrogen dioxide, and particulate standards occurred, following a year in which only 1 violation (of the particulate standard) occurred.

The entire Bay Area Air Basin has been designated by the California Air Resources Board as a non-attainment area for ozone (oxidant), carbon monoxide, and particulate (i.e., the standards for these pollutants are now and are expected to continue being violated). A regional Air Quality Plan was recently adopted which establishes control strategies to attain and maintain the standards by 1982 or 1987./1/

NOTE - Air Quality

/1/ Association of Bay Area Governments, BAAQMD, and Metropolitan Transportation Commission, January 1979, 1979 Bay Area Air Quality Plan, San Francisco Bay Area Environmental Management Plan. The Federal Clean Air Act Amendments of 1977 mandate that the ozone and carbon monoxide standards be attained by 1982, although a 5-year extension is possible, and that the particulate standard be attained by 1987.

H. NOISE

As is typical of downtown San Francisco, the noise environment of the site is dominated by vehicular traffic noise. Noise levels were measured for approximately 15 minutes at each of 4 locations near the project site during the afternoon of Thursday, 15 March 1979 (see Figure 20). The results are shown in Table 8, p. 45.

The Environmental Protection Element of the San Francisco Comprehensive Plan (adopted 19 September 1974, p. 17) indicates an L_{dn} of 70 dBA on Battery St., and 65 dBA on Sacramento and Front Sts. in 1974./1/ These figures do not take into account the "urban-canyon" effect. This effect occurs along downtown streets flanked by tall buildings where noise energy can increase due to multiple reflections. Therefore, when the contribution of other streets

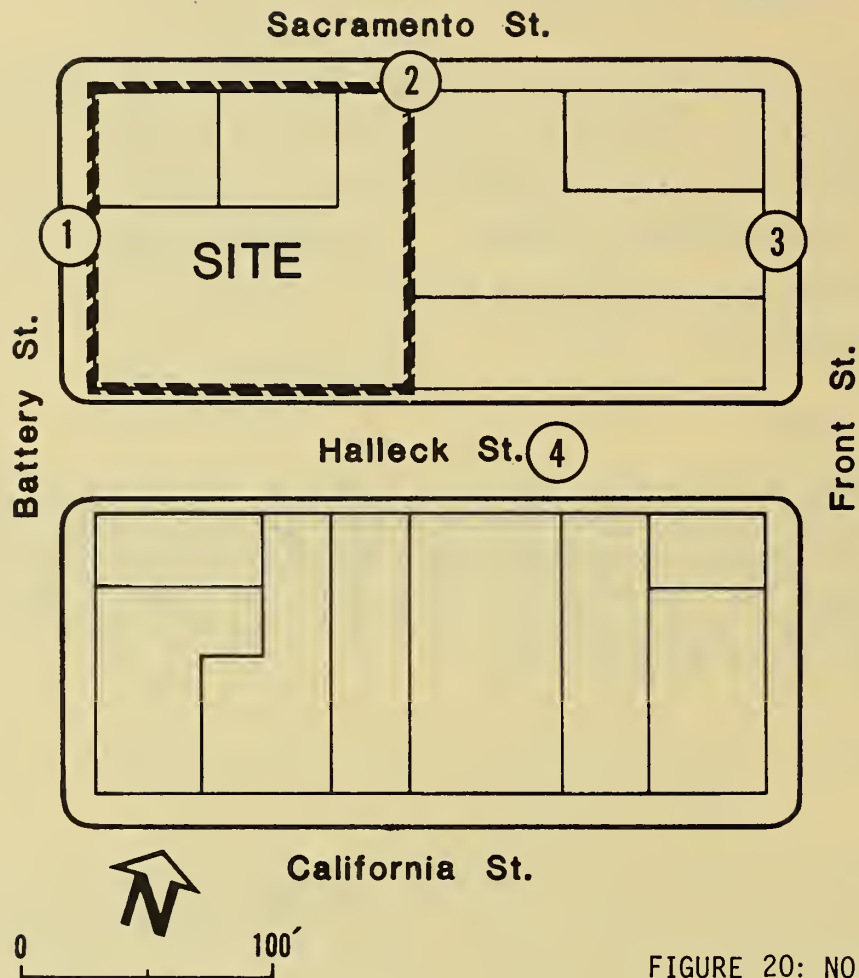


FIGURE 20: NOISE MEASUREMENT LOCATIONS

and the "urban-canyon" effect are accounted for, one would expect a higher L_{dn} noise level; this is borne out by the measurements shown in Table 8, p. 45.

NOTES - Noise

/1/ See footnotes to Table 8 for definitions of L_{dn} and dBA.

TABLE 8: NOISE LEVELS NEAR PROJECT SITE

<u>Location</u>	<u>Measured L₁₀* (dBA***)</u>	<u>Estimated L_{dn}** (dBA***)</u>
1. Battery St., Sacramento-Halleck	81	78
2. Sacramento St., Battery-Front	75	72
3. Front St., Sacramento-Halleck	71	68
4. Halleck St. Battery-Front	67	64

*L₁₀ is the noise level exceeded 10% of the time.

**L_{dn}, the day-night average noise level, is a noise measurement based on human reaction to cumulative noise exposure over a 24-hour period, taking into account the greater annoyance of nighttime noises (noise between 10 p.m. and 7 a.m. is weighted 10 dBA higher than daytime noise).

***dBA is the measure of sound in units of decibels (dB). The "A" denotes the A-weighted scale which simulates the response of the human ear to various frequencies of sound.

I. ENERGY

The Pacific Gas and Electric Company (PG&E) furnishes electricity and natural gas to the City of San Francisco. Gas distribution mains and underground electric facilities are used by the existing structures on the site. PG&E obtains a portion of its electrical energy from renewable resources including geothermal and hydrologic power; it will meet new demands for energy primarily by increasing the use of coal, oil, natural gas and nuclear fuels.

J. GEOLOGY, SEISMICITY AND HYDROLOGY

GEOLOGY

The site is located on flat land about 1,800 ft. southwest of San Francisco Bay. The site is 10 ft. above mean sea level; this corresponds to about 1.5 ft. above the San Francisco datum (SFD). Higher land is located to the west at Nob Hill, to the northwest at Telegraph Hill and to the southeast at Rincon Hill.

- Before 1850, the site was underwater within Yerba Buena Cove of San Francisco Bay. The cove was then filled with dune sand, silt, clay, rock waste from excavations, organic material and garbage. By 1852, the site was dry land near sea level. Between 1867 and August 1870, the first sea wall was constructed along Front St. and south from Jackson St. to Howard St. to protect the fill.

Although a site-specific soils investigation has not been done, typical profiles in the area indicate approximately 200 to 250 ft. of non-rock sediments above bedrock, which is composed of the Franciscan formation./1/ The profile might include an upper layer of fill and Bay mud about 50 ft. deep, underlain by 150 to 200 ft. of dense clays and sand.

The above figures are approximate; the geologic units are not of uniform thickness. Because the soft Bay mud and artificial fill are compressible and unstable, the materials are unsuitable as a foundation base. Thus, all large buildings in the vicinity are supported by piles driven into the next layer of geologic material, the dense clayey sand. The underlying old Bay clays are stiff (non-plastic) and capable of bearing heavy loads.

SEISMICITY

No active faults (faults which have a historic record or other geophysical evidence of movement within approximately the last 10,000 years) are known to exist within San Francisco. As a deep sediment layer covers the site, it is not known whether any inactive faults are concealed beneath the site. Several

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nearby active faults affect San Francisco. These are the San Andreas Fault, located about 10 miles southwest of the site; the Hayward Fault, about 15 miles to the east; and the Calaveras Fault, about 30 miles to the east (see Figure 21). Other active faults which have not been detected may exist in the area.

Both the San Andreas and the Hayward Faults have a recent history of major and minor movements. Large and small earthquakes can be expected in this region in the future. Within the next 60 to 170 years (estimates of recurrence intervals vary), at least 1 earthquake of the magnitude of the 1906 San Francisco earthquake (about 8.3 on the Richter scale of magnitude, a logarithmic scale developed to measure earthquake magnitude by the energy released), and several earthquakes comparable to the 1957 Daly City earthquake (Richter 5.3) can be expected to affect the proposed building.

According to John A. Blume's San Francisco Seismic Safety Investigation, Geologic Evaluation (1974), potential earthquake hazards on the project site include "violent" ground shaking (defined as causing a fairly general collapse of brick and frame structures when not unusually strong, serious cracking of better buildings, lateral displacement of streets, and ground fissuring), liquefaction (the transformation of granular material, such as loose wet sand, into a fluid-like state similar to quicksand) with resultant lateral ground slippage and bearing capacity failure, and subsidence (the sinking of the land surface due to settling of compressible soils).

HYDROLOGY

No water bodies, springs or water courses are located on the site, as it is currently occupied with structures. The site is low-lying and under natural drainage conditions would receive the runoff from the surrounding areas to the north and west. Surface runoff is generally greatest during the wet-weather November through April period.

The project site is located within the estimated run-up area of a 500-year tsunami (a series of sea waves created by an earthquake, a coastal or submarine landslide or volcanic eruption at some distance from the point of

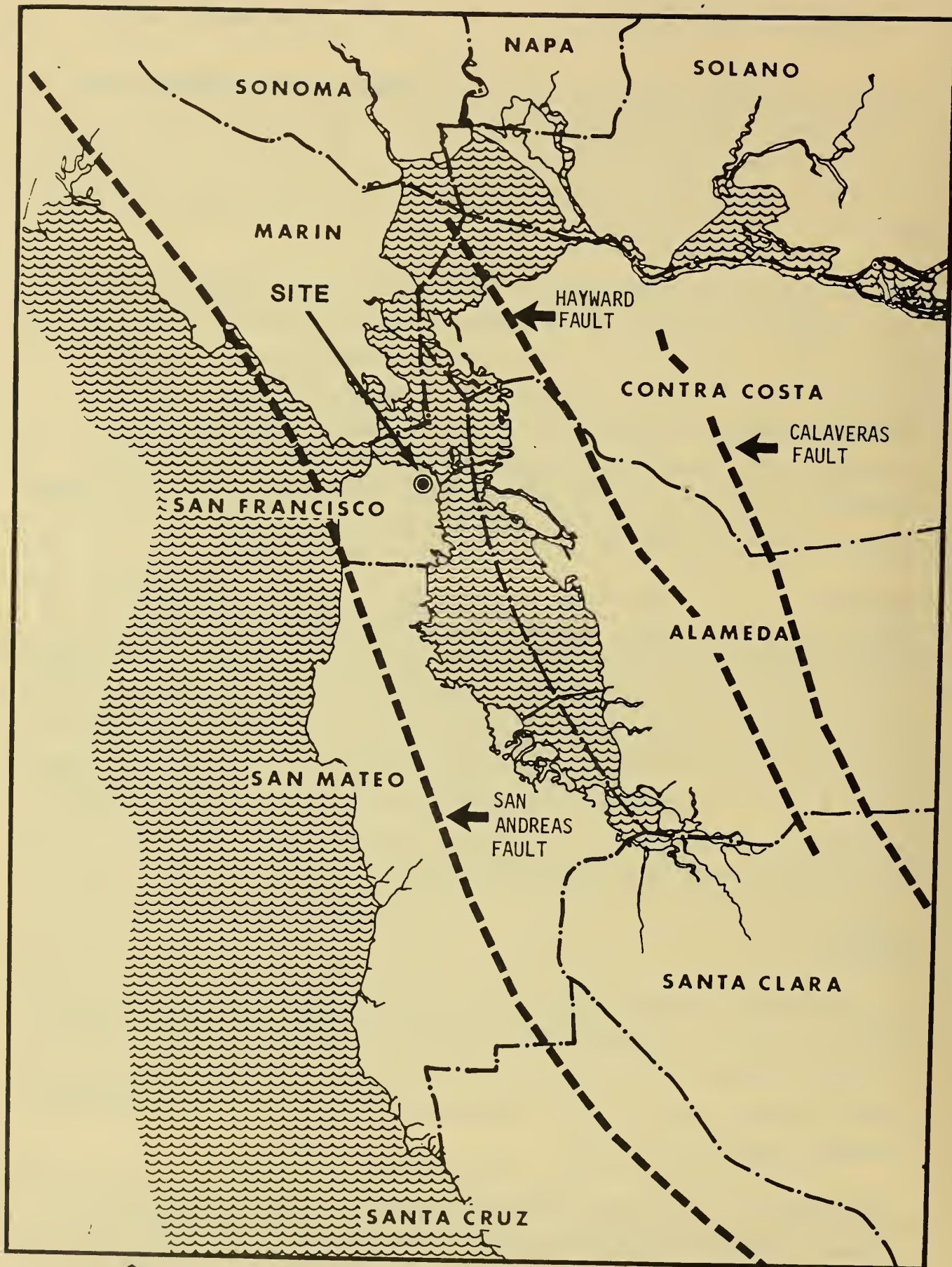


FIGURE 21: MAJOR ACTIVE FAULTS IN
SAN FRANCISCO BAY AREA

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run-up, with a probability of occurring once in 500 years). Assuming a 20-ft.-high run-up at the Golden Gate, the 500-year tsunami would cover areas at the site to a height of 10 ft. above mean sea level. Since the base of the site is at 10 ft. above mean sea level, the basements and ground floors of the existing structures might be subject to water damage. The 100-year tsunami might also inundate the site./2/

The groundwater level in the upper fill material is below mean sea level (-8.6 ft. SFD). The groundwater level in the sands below the Bay mud has fluctuated over the past few years due to dewatering for construction. The water level in the sands is believed to be rising again to mean sea level./3/

NOTES - Geology, Seismicity and Hydrology

/1/ Franciscan rocks are typical of the northern California Coast Ranges and underlie the hills of San Francisco. They consist of a mixture of dark colored muddy sediments, red, green and brown cherts and lava flows of black basalt, all material laid down on the floor of the Pacific Ocean about 100 million years ago. Cherts are rocks formed by deposits of silica containing microorganisms, which are transformed into hard, waxy or porcelain-like rocks. Franciscan rocks are also known as Franciscan Formation Assemblage. See Roadside Geology of Northern California, David D. Alt and Donald H. Hyndman, Mountain Press Publishing Company, Missoula, Montana, 1975.

/2/ Garcia, A.W., and J.R. Houston, 1975, Type 16 Flood Insurance Study: Tsunami Predictions for Monterey and San Francisco Bays and Puget Sound, Technical Report H-75-17, U.S. Army Engineer Waterways Experiment Station, Vicksburg, Mississippi, 39180.

/3/ Dames and Moore, 1974, Preliminary Soil Consultation, Proposed Office Buildings, California/Davis Street Property, San Francisco, California, for Cahill Construction Company, plates 2 and 3.

IV. ENVIRONMENTAL IMPACT

A. LAND USE AND ZONING

The proposed use of the project site for an office structure would comply with the general objectives of the San Francisco Comprehensive Plan, and with the specific statement in Section 210.3 of the City Planning Code that the C-3-0, Downtown Office District, is "playing a leading national role in finance, corporate headquarters and service industries, and serving as an employment center for the region. . . . Unrelated uses (are) excluded in order to conserve the supply of land in the core and its expansion areas for further development of major office buildings."

The project height would be about 100 ft. lower than the maximum permitted height of 450 ft., the diagonal dimension would be about 35 ft. less than the maximum permitted diagonal dimension of 200 ft. (above a height of 150 ft.) and the length would be about 30 ft. less than the maximum permitted building length of 170 ft.

The Basic Floor Area Ratio (FAR) of 14:1 for the site would allow about 245,000 gross sq. ft. of building area on the site under the C-3-0 classification, exclusive of bonuses. The project would include about 289,000 gross sq. ft. The additional area is based on a corner premium as provided in Chapter II, Article 1, Section 102.14 of the San Francisco Planning Code. Under this article, that portion of a lot in a C-3-0 district within 125 ft. of a corner is allowed up to a 20% greater floor area ratio, but no such lot can be considered wider or deeper than 125 ft. The project qualifies for a 43,570 sq. ft. bonus under these provisions./1/ This bonus is allowed in lieu of other available bonuses. The total gross floor area of the project is consistent with this allowed bonus.

NOTE - Land Use and Zoning

/1/ Corner bonus calculation is as follows:

$$125 \text{ ft.} \times 125 \text{ ft.} \times 14 \times 20\% = 43,750 \text{ sq. ft.}$$

Basic FAR:	245,438
Bonus	43,750
Total Permitted Floor Area	<u>289,188</u> sq. ft.

B. URBAN DESIGN AND VISUAL ASPECTS

ARCHITECTURAL RESOURCES

Construction of the proposed project would require demolition of 3 buildings. Two of these, 280 Battery St. and 353 Sacramento St., are included in the 1976 Architectural Inventory and are rated "B" in the Heritage architectural historical survey (see III.B, p. 23).

RELATIONSHIP OF THE PROJECT TO THE COMPREHENSIVE PLAN

The Urban Design Element of the San Francisco Comprehensive Plan, adopted by Resolution 6745 of the San Francisco City Planning Commission on 26 August 1971, contains principles and policies intended to serve as guidelines for the design and interpretation of structural and environmental development and for the preservation of architecturally or historically significant buildings or places. The relationship between the applicable urban design policies of the Comprehensive Plan and the proposed project is shown in Table 9.

PROJECT VISIBILITY

- The lobby and shop windows of retail spaces would be visible from the street-level areas on adjacent blocks on Battery and Sacramento Sts. and from the open, diagonal pedestrian way. The proposed truck docks, located on the eastern portion of the site, could be seen from Halleck St. and from the intersection of Battery and Halleck Sts. (text continued on p. 54)

TABLE 9: RELATIONSHIP BETWEEN APPLICABLE URBAN DESIGN POLICIES OF THE
SAN FRANCISCO COMPREHENSIVE PLAN AND THE PROPOSED PROJECT

<u>APPLICABLE URBAN DESIGN POLICIES</u>	<u>RELATIONSHIP OF PROJECT TO APPLICABLE POLICIES</u>
A. <u>Policies for City Pattern</u>	
1. Policy 1. Recognize and protect major views in the City, with particular attention to those of open space and water (p. 10).	The project would retain public views down the Sacramento St. corridor to the Bay. It would interrupt some private, upper-story views from Nob Hill across the site to the Bay. Most views across the property are already blocked by the Embarcadero Center to the north and by buildings at 100 California St. and 464 California St.
2. Policy 3. Recognize that buildings, when seen together, produce a total effect that characterizes the City and its districts (p. 10).	The proposed building would be a point tower with a maximum plan dimension of 127 ft. and a maximum height of 351 ft. As such, it would relate to buildings of similar height and bulk at 601 Montgomery, 505 Sansome, 425 California, and 350 California. It would be dominated by the 45-story One Embarcadero Center to the north, and would dominate the 2- and 3-story buildings to the east, and the medium-rise buildings on California St., particularly the Newhall Bldg. (Fidelity Savings and Loan Association) at Battery St. (see Figure 22, p. 55).
B. <u>Policies for Conservation</u>	
3. Policy 4. Preserve notable landmarks and areas of historic, architectural or aesthetic value, and promote the preservation of other buildings and features that provide continuity with past development (p. 25).	Project implementation would result in the demolition of 2 buildings included in the 1976 Architectural Inventory and rated "B" in the Heritage Survey (see IV.B, p. 51).
4. Policy 6. Respect the character of older development nearby in the design of new buildings (p. 25).	In height and design, the building would be compatible with nearby highrise buildings. Because of its height, it would be different in scale and design from nearby post-earthquake, lowrise buildings.

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5. Policy 7. Recognize and protect outstanding and unique areas that contribute in an extraordinary degree to San Francisco's visual form and character (p. 25).

The project area is part of the Financial District, an area whose visual form is characterized by highrise buildings.

C. Policies for Major New Development

6. Policy 1. Promote harmony in the visual relationships and transitions between new and older buildings (p. 36).
7. Policy 2. Avoid extreme contrasts in color, shape and other characteristics which will cause new buildings to stand out in excess of their public importance (p. 36).
8. Policy 5. Relate the height of buildings to important attributes of the city pattern and to the height and character of existing development (p. 36).
9. Policy 6. Relate the bulk of buildings to the prevailing scale of development to avoid an overwhelming or dominating appearance in new construction (p. 37).

The polished lightweight material and gray glass skin of the building would relate to the glass facade of 425 California St., one block to the south, but is expected to be less reflective. It would be in contrast to the brick of older buildings nearby or the concrete of the adjacent Embaracado Center. The 30-ft. height of the first set back on Sacramento St. would relate to the podium level of One Embarcadero Center.

Although the proposed building would be rectilinear in shape at the base, the upper-level, corner setbacks would result in a distinctive appearance.

See Item 2 above. The building would be more than 200 ft. lower than the adjacent Security Pacific Building at One Embarcadero Center, but would be similar in size and height to other newer buildings in its vicinity.

See Item 2 above. The building would be a point tower with dimensions smaller than the standard 50-vara lot (137.5 ft. x 137.5 ft.) which is prevalent in the area. (The vara is a Spanish unit of measurement equal to 2.75 ft. North of Market was laid out in 50-vara lots; South of Market in 100-vara lots.)

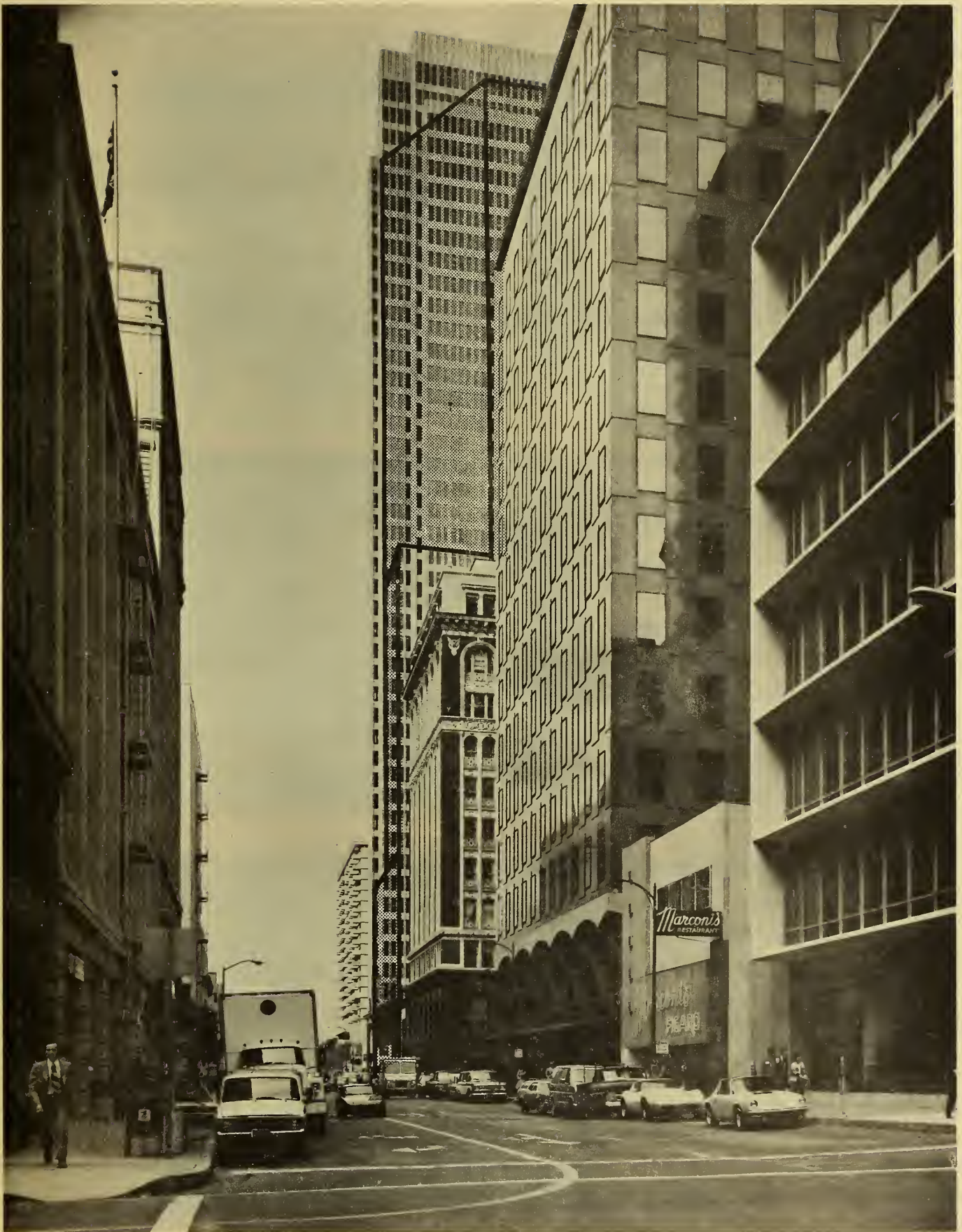
D. Policies for Neighborhood Environment

10. Policy 13. Improve pedestrian areas by providing human scale and interest.

The ground level plan would provide a diagonal pedestrian way and short-cut across the property, with retail uses and display windows opening on either side.

The facade of the proposed building would be visible from street-level areas on the surrounding blocks on Battery and Sacramento Sts. Views would include all or portions of the building. Views from the intersection of Battery and Pine Sts. south of the project would include the west face of the building and the upper floors of the south side of the building, starting from below the Halleck St. setback at the 14th floor. The upper floors of One Embarcadero Center would be visible as a backdrop (see Figure 22). Views from the intersection of Sacramento and Front Sts. east of the project would include all of the north side of the building including both setbacks on Sacramento St. The tower would replace existing foreground views of older, low-rise buildings and more distant views of high-rise development from portions of the podium level of Two Embarcadero Center. The upper floors of the project would be visible from the east above the existing low- to medium-rise structures fronting on California and Front Sts. The setbacks, landscaped with small evergreen trees and shrubs in planters, would provide visual relief.

From mid-range locations, views of the project would tend to blend with the existing or proposed structures. Seen from Telegraph Hill to the north, a portion of the west side of the building would partially fill the existing space between One Embarcadero Center and 100 Pine St. The project would not block any view of the Bay from Telegraph Hill. The project would not be generally visible from street level on Nob Hill to the west because of the intervening Wells Fargo Bank Building at 464 California St. The project could block some views of the Bay from the upper floors of apartments on Nob Hill; but most of the views have already been blocked by existing buildings, such as the Union Bank Building. Views of the project from the Fairmont Hotel, west of the site, would be obstructed by the Hartford Building at 650 California St. Existing or proposed structures would block most long-range views of the proposed project. The Embarcadero Center buildings would obscure it from Yerba Buena Island and the Marin Vista Point at the north end of the Golden Gate Bridge.



EXISTING 280 BATTERY ST. ▲ ▲ FIDELITY SAVINGS AND LOAN ASSOCIATION
 240-248 BATTERY ST. ▲ ▲ (ONE EMBARCADERO CENTER IS IN THE BACKGROUND)

PROPOSED PROJECT ▲ FIGURE 22: VIEW OF PROJECT FROM PINE ST. NORTH ALONG BATTERY ST.

LIGHT AND SHADOW EFFECTS

The City's Urban Design Policy for Major New Development (San Francisco Comprehensive Plan, Urban Design Element, p. 36) states that "buildings to the south, east and west of parks and plazas should be limited in height or effectively oriented so as not to prevent penetration of sunlight to such parks and plazas." The proposed project would be located south of the podium level of One Embarcadero Center and 1 block to the southwest of the podium level of Two Embarcadero Center.

During early mornings in the fall, winter and spring months (see Figure 23), shadows on the Battery and Sacramento St. sidewalks to the west and north of the site would be unchanged. On summer mornings, Sacramento St. would remain in sunlight and shadows would be cast on the Battery St. sidewalks. New shadows would be thrown on the existing structures to the west of the site.

From mid-morning to mid-afternoon during the spring and fall months (see Figure 24, p. 58), lengthened shadows would be cast on Sacramento St. sidewalks; currently, only part of Sacramento St. is shaded. During the winter, midday shadows would affect the lower and middle floors of One Embarcadero Center. During the summer months at mid-day hours, the project tower would shade the Sacramento St. northern sidewalk.

The project tower would cast early-afternoon shadows on the podium level of Two Embarcadero Center in the spring and fall (see Figure 25a, p. 59a), and would add to shadowing of the podium level during early afternoons in the winter. There would be no change in existing shadow patterns in the late afternoon and early evening hours throughout most of the year (see Figure 25, p. 59). In the summer, low-rise buildings on the west side of Front St. between Sacramento and California Sts. currently receive sunlight; the project would cast afternoon shadows on these structures.

WIND EFFECTS

The changes the proposed building would make in wind directions and velocities at pedestrian level have been studied by the use of models in a wind tunnel to

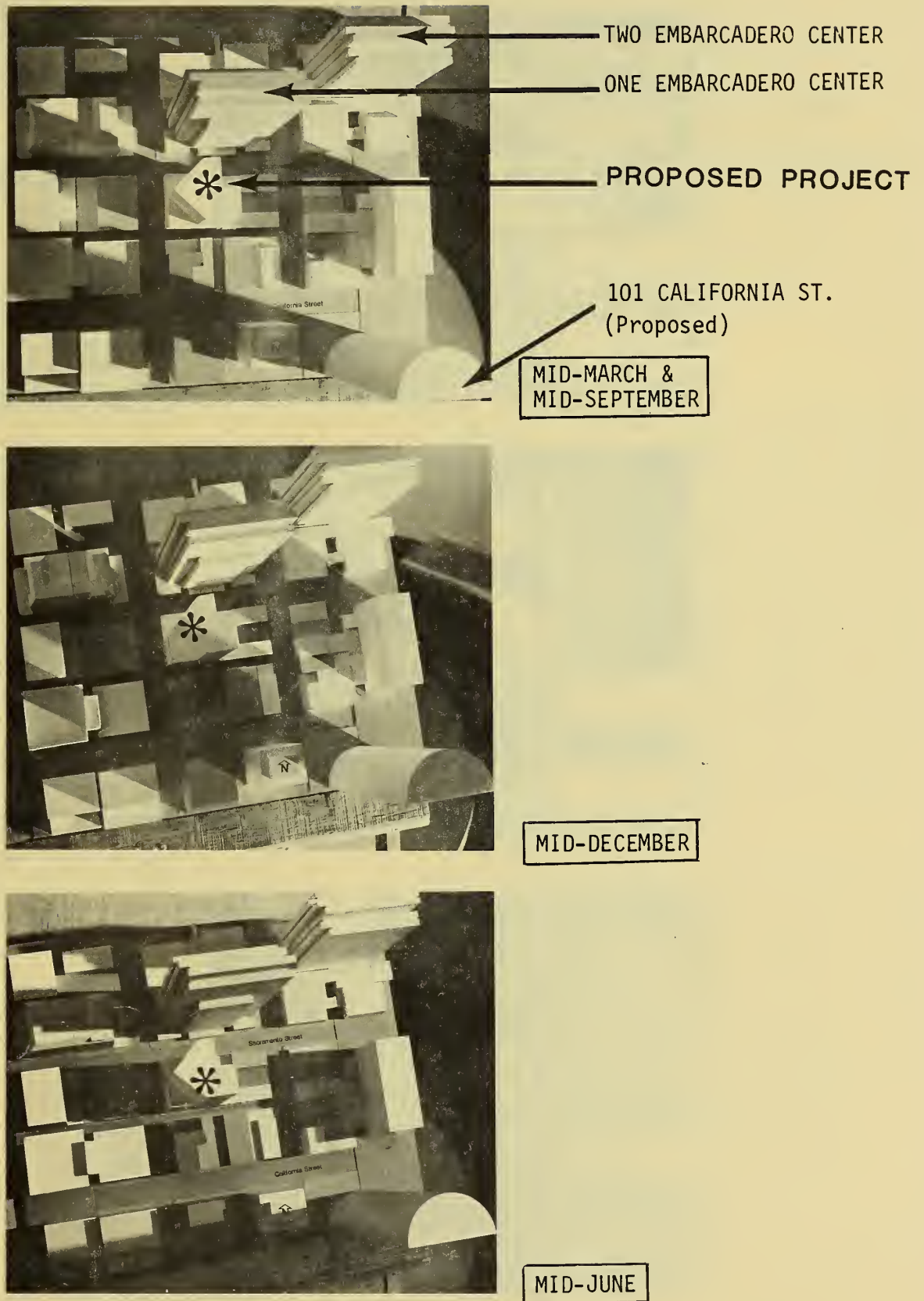


FIGURE 23: PROJECTED SHADOW PATTERNS
AT 8 A.M. (STANDARD TIME)

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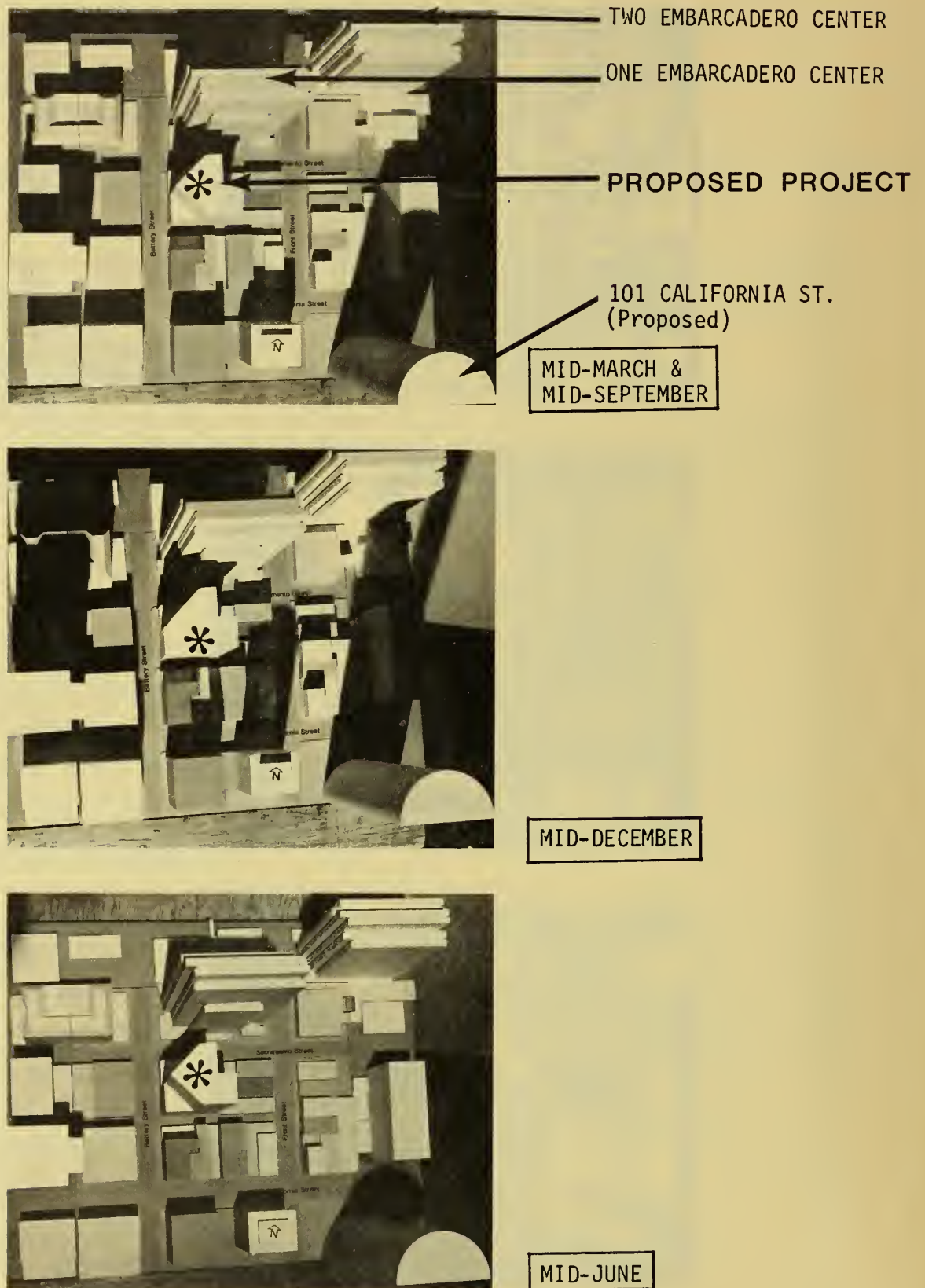


FIGURE 24: PROJECTED SHADOW PATTERNS
AT 12:00 NOON (STANDARD TIME)

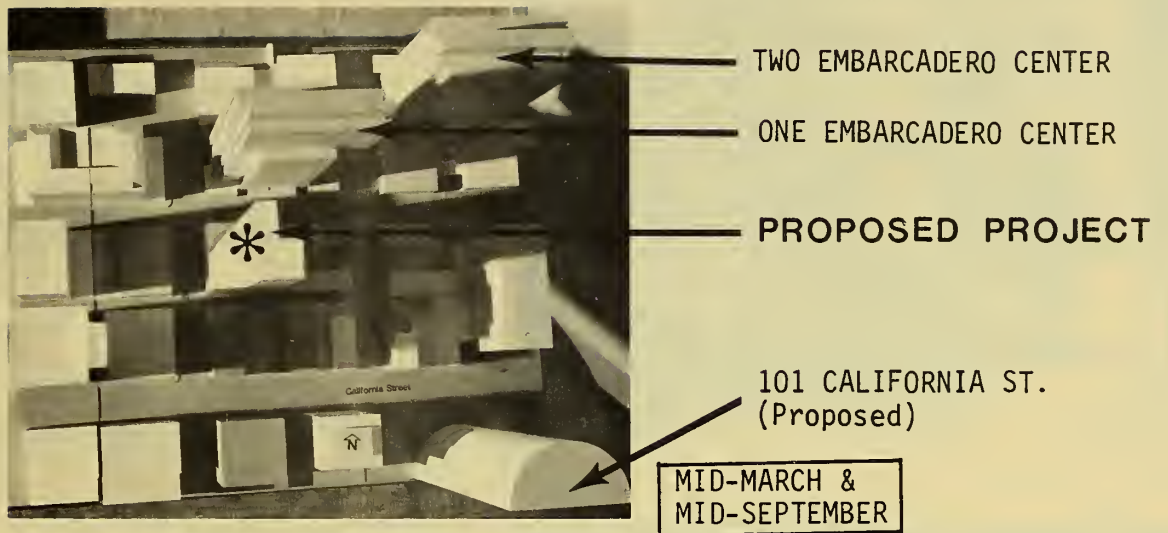
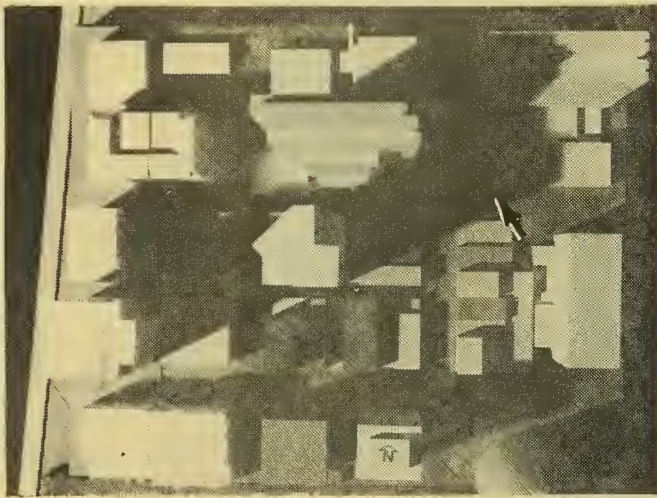
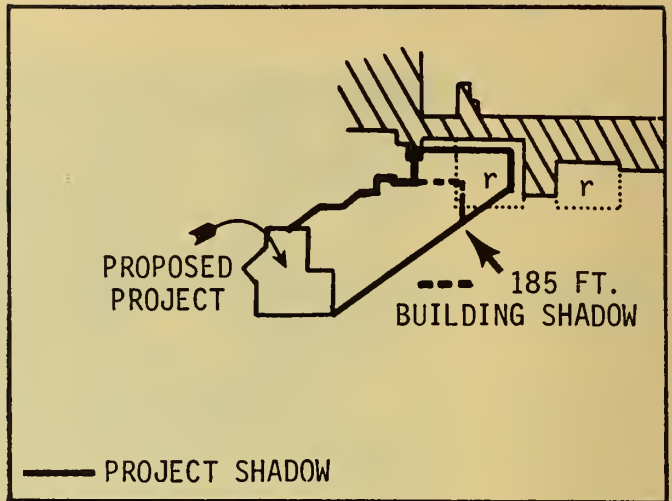


FIGURE 25: PROJECTED SHADOW PATTERNS
AT 4 P.M. (STANDARD TIME)

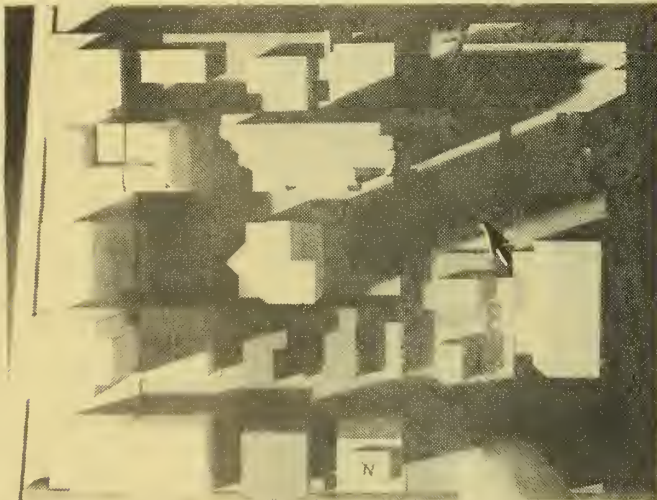
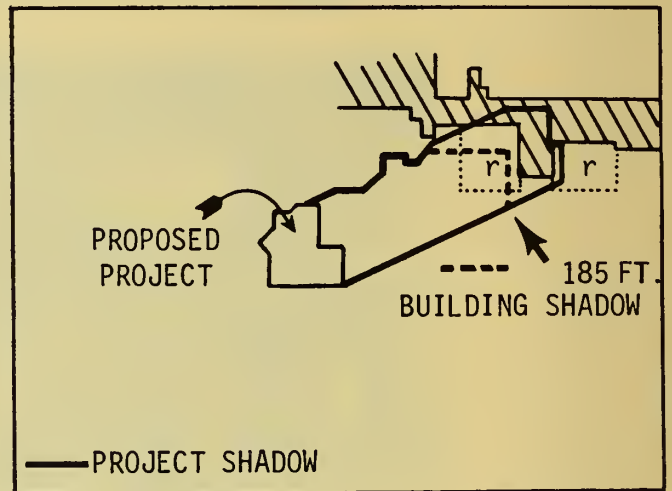
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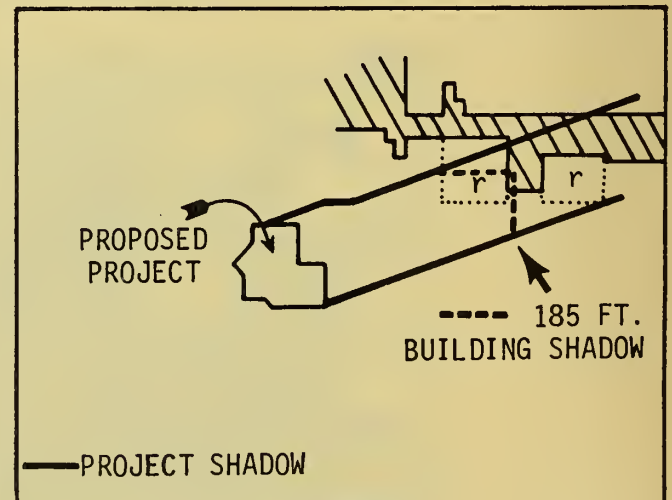
2:00 P.M.



2:30 P.M.



3:00 P.M.



ARROW INDICATES LENGTH OF
SHADOW OF 185 FT. BUILDING



NON-PEDESTRIAN AREAS (ROOFTOPS)
ON PODIUM LEVEL



PEDESTRIAN AREAS OF EMBARCADERO
PODIUM LEVEL

● FIGURE 25a: SHADOW EFFECTS - 2-3 P.M.,
MID-MARCH/MID-SEPTEMBER
(SOLAR TIME)

simulate natural winds near the ground (see Appendix C, p. 139 for the text of the study). Tests were conducted for northwest and west winds, the most common wind conditions in San Francisco. Wind speeds at pedestrian levels were evaluated as a percentage of the wind speed measured by the U.S. Weather Service at the top of the Federal Building at 50 United Nations Plaza which is the wind reference point nearest the site. This percentage is the ratio of the wind speed at pedestrian level to the wind speed measured at the top of the Federal Building. The resulting percentage, or wind speed ratio, would remain relatively constant for calm or windy conditions.

Generally, moderately high to high northwesterly wind speed ratios now occur in the area, particularly at the intersections of Battery and Sacramento Sts. and Front and Sacramento Sts. Windflows occur along the north-south streets, diminishing in speed towards the south. Along east-west streets, northwesterly winds are generally turbulent, with wind speed ratios varying from moderate to moderately high. The pedestrian podium levels at One and Two Embarcadero Center have high to very high wind speed ratios. During westerly winds, the site is sheltered by upwind buildings so that the wind speed ratios are light, ranging from low to moderately low.

The project would not affect basic northwesterly air flow patterns, except along Sacramento St. Wind speed ratios along Sacramento St. near the site would decrease by about 10%, while wind speed ratios on Halleck St. would decrease by about 21%. The greatest impact under northwesterly wind conditions would occur at the northeast corner of Halleck and Battery Sts. where wind speed ratios would increase by approximately 40% from moderate to moderately high. Wind speed ratios would also increase near the intersection of California and Battery Sts. Wind speed ratios at the podium level of the Embarcadero Center would be unchanged. Wind speed ratios on the roofs of the setbacks at Halleck St. and between the entranceways would be high, particularly on the Halleck St. setback. The Sacramento St. setback would be sheltered from the wind.

The project would cause changes in the air flow patterns of westerly winds near the site. The northerly flow of these winds along Battery St. would be reversed south of the site, and enhanced north of the site by the wind

intercepted by the project. Wind speed ratios at the intersection of Battery and Sacramento Sts. would increase from moderately low to moderate, as would wind speed ratios on the west side of the intersection of Battery and Halleck Sts. Wind speed ratios would increase along Halleck and Sacramento Sts. from low and moderate (see Appendix C, p. 139).

C. CULTURAL AND HISTORIC ASPECTS

● The building excavation would extend to a depth of 15 ft. below the existing surface, or 5 ft. below the existing basement level. There is no recorded citation of any sunken ships on the site. However, there is a possibility of finding fragments from unrecorded sunken ships and gold rush era artifacts which were deposited in the fill material. Recorded data on ship locations is derived from a number of sources and may not be completely accurate (H. Soeten, Curator of the National Maritime Museum of San Francisco, personal communication, 27 February 1979).

D. COMMUNITY SERVICES AND UTILITIES

Police. As more people would be employed on the site, the project would result in an increase in the number of calls for police assistance. Petty thefts could increase. Captain D'Arcy, Commanding Officer of the Central District Station, does not anticipate that additional police officers would be required./1/ Internal security would be provided to the Daon Building by a 24-hour security guard service in the lobby, with an additional guard at night. Closed-circuit television would be used to survey the loading docks.

● Fire. The project would incorporate the fire protection measures required by the San Francisco Building Code. There would be no need for additional fire-fighting staff or equipment, according to City Fire Marshal W. Graham. The existing water supply would be adequate to meet the needs of the proposed project for fire-fighting services./2/

Water. Domestic water would be provided from the Water Department's existing mains under Battery or Sacramento Sts. No capital improvements to the water

distribution system are anticipated. Either Battery or Sacramento Sts. would have to be disrupted from the curb to the mains for approximately 3 working days to excavate and install water service. Vehicle and pedestrian traffic would not be interrupted; 1 parking lane would be eliminated during construction.

At full project occupancy, estimated daily water demand would be 31,000 gallons, approximately 15 times the current daily use at the site of 2,000 gallons./4/ This would be about 0.04% of the average daily San Francisco water use of 79.1 million gallons in 1978. Cumulative Downtown development (see Appendix H, p. 167, for a list of buildings considered), including the proposed project, would use an estimated 2,790,000 gallons per day, 3.5% of the average daily San Francisco water use. An estimated 75,000 gallons of water would be used during the 19 months of construction.

Sewer. Projected wastewater flows generated by the project at full occupancy would be approximately 31,000 gallons per day. There is sufficient sewer capacity to accommodate projected flows and no mains would have to be removed or enlarged. The North Point Water Pollution Control Plant would be able to provide treatment for the dry-weather flows./5/ Wastewater flows from the project would constitute about 0.06% of the average daily dry-weather flow of 52 million gallons to the North Point Water Pollution Control Plant. The increased flows generated by the project would contribute to existing storm overflows of sewage into the Bay during wet weather until projects now under design to reduce these flows are completed.

Cumulative Downtown development (see Appendix H, p. 167, for a list of buildings considered), including the proposed project, would generate approximately 1,421,000 gallons of wastewater per day, 2.7% of the average daily wastewater flows to the North Point Plant.

Dewatering of the construction site would generally occur only during rainstorms and would be required intermittently for about 26 weeks. Periodic discharge into the sewers would occur during this period.

Solid Waste. The proposed project would generate approximately 1.5 tons per day of solid waste./6/ This is about 5 times the current amount of 600 lbs.

IV. Environmental Impact

generated on the site and would represent less than 1% of the Golden Gate Disposal Company's current daily volume of 1,500 tons. Golden Gate Disposal Company would have no difficulty in accommodating the demand./7/ Cumulative Downtown development (see Appendix H, p. 167), including the proposed project, would generate an estimated 73 tons of solid waste per day, about 4.8% of the current daily volume collected by Golden Gate Disposal Company.

Approximately 6,800 cu. yds. of material would be removed from the site during construction to an undetermined private landfill site on the Peninsula.

Telephone. To provide telephone service to the project, Pacific Telephone & Telegraph Company would install a new conduit to reinforce the existing system. One of the 2 lanes of traffic on Sacramento St. would be blocked for up to 2 weeks during installation of the conduit. Pacific Telephone and Telegraph indicates that its system would be able to handle the additional circuit load from the project./8/

NOTES - Community Services and Utilities

/1/ Capt. G. D'Arcy, Commanding Officer, Central District Station, Police Department, letter communication, 16 February 1979 and telephone communication, 14 March 1979.

/2/ Chief W. Graham, Fire Marshal, Fire Department, letter communication, 12 February 1979.

/3/ J. Kenck, Manager, City Distribution Division, Water Department, letter communication, 26 February 1979.

/4/ The water demand estimate assumes retail use of 200 gallons per day and office use of 125 gallons per day per 1,000 sq. ft. of usable floor space; Brown and Caldwell Consulting Engineers, 1972, Report on Wastewater Loading from Selected Development Areas, as cited in San Francisco City Planning Commission and San Francisco Redevelopment Agency, 1978, Final Environmental Impact Report/Yerba Buena Center, EE.77.220.

/5/ M. Francies, Investigation Section, Bureau of Sanitary Engineering, letter communication, 20 February 1979.

/6/ California Solid Waste Management Board guidelines developed in 1974, "Solid Waste Generation Factors in California" (308,000 gross sq. ft. x 1 lb. per 100 gross sq. ft. per day = 3,000 lbs. or 1.5 tons per day).

/7/ F. Garbarino, Office Manager, Golden Gate Disposal Company, telephone communications, 20 March 1979 and 1 June 1979.

/8/ W. Ottens, Engineer, Pacific Telephone and Telegraph Company, telephone communication, 8 March 1979.

E. ECONOMIC ASPECTS AND RELOCATION

SITE-RELATED DIRECT IMPACTS

Office and Retail Space. The project would continue the trend toward higher rents and more intensive use of land in the Downtown business district. Construction of the Daon Building would cause the removal of about 26,000 gross sq. ft. of office space, and add about 275,100 gross sq. ft. to the existing 56 million sq. ft. of office space in Downtown San Francisco. This would be about a 0.5% increase over existing total Downtown office space and a 1% increase over Downtown space in high-rise structures. The net increase in leasable office space would be about 212,000 net sq. ft. The project would cause the removal of about 10,300 net sq. ft. of leasable ground-level retail and restaurant space and would replace it with about 8,300 net sq. ft. of retail space on the ground floor.

Annual rents at the Daon Building would range from about \$25 per sq. ft. for retail space and \$15 to \$19 per sq. ft. for office space./1/ These rents would be about 1-1/2 to 2 times higher than existing rents on the site.

Permanent Employment. Total permanent employment at the project site would be about 1,200 persons as compared to current employment of about 220 persons./2/ About 98% of the workers would hold office jobs. Table 10 shows a breakdown of employment by type.

● Secondary Income Effects. Based on surveys of the places of residence of employees at existing Downtown high-rise office developments and data from the Metropolitan Transportation Commission, an estimated 42% or about 510 project employees, would be San Francisco residents. Assuming that employees at the Daon Building would spend 80% of their disposable income in the City, approximately \$4.6 million of secondary income would be generated in the City (based on an average annual disposable income of about \$15,000 (1979 constant dollars) minus 25% gross taxable income for office workers and \$10,000

TABLE 10: ESTIMATED GROSS PERMANENT EMPLOYMENT*

<u>EMPLOYMENT CATEGORY</u>	<u>PERCENT</u>	<u>NUMBER</u>
Retail	1	15
Office	98	1,190
Maintenance & Security	1	10
TOTAL	<u>100</u>	<u>1,215</u>

*The table assumes 600 net sq. ft. per retail employee, 200 net sq. ft. per office employee, and zero vacancy, and represents a probable daytime population of about 1,215 persons.

minus 22% gross taxable income for retail and maintenance and security workers). This amount would represent about a 285% increase over the \$1.2 million of secondary income currently generated from the project site. This does not imply that all of the secondary income generated by Daon building employees would be new to the City, since firms already located in the City would be expected to relocate to the proposed building, nor does it imply that all of the secondary income generated by existing employees on the project site would be lost to the City since many of the displaced firms would be expected to relocate elsewhere in San Francisco.

A 1974 survey of Downtown office workers by Keyser Marston Associates, Inc. estimated that taxable annual expenditures for meals, apparel, cosmetics and so forth by workers are about \$950 per capita (escalated at 6% annually to 1979 dollars).^{/3/} Total Downtown expenditures by permanent project employees are estimated at \$1.1 million annually. Approximately \$479,000 or 42% of these expenditures would be included in the \$4.6 million of total annual secondary income described above.

Short-Term Construction Employment. Based on an annual average wage of \$28,000, it is estimated that the project would require about 190 person-years of construction labor with a construction payroll of \$5.4 million.^{/4/} This is approximately an average of 120 full-time jobs at any one time during the 1-1/2 year construction period. J. Singer of Swinerton and Walberg

Construction Company estimates that about 84 to 90, or 70% to 75%, of those jobs would be expected to be held by San Francisco residents (telephone communication, 2 February 1979). Secondary temporary employment effects would also be created when construction laborers spend their incomes on goods and services. These secondary jobs could be estimated on the basis of a 1 to 1 ratio, or 1 secondary job for every direct construction job./4/. This would be the equivalent of 190 full-time 1-year jobs in the region.

Relocation. Eleven businesses employing about 220 persons would be displaced from the project site. Interviews were conducted with each of the tenant businesses to find out the effects of relocation on these businesses (see also Appendix D, Table D-1, column 6, p. 151). Surveyed businesses indicate that the effects of relocation would include time spent in searching for a new location, planning renovations and moving, and the costs of renovation and moving. Many businesses anticipate difficulty in finding a comparable new location. Gourmet Plate and Stone Soup restaurants indicate that moving and reinstallation of food preparation equipment would be difficult and costly. A spokesperson for M. Arthur Gensler and Associates, which occupies about 28,000 sq. ft. of space, states that heavy office equipment would have to be moved. Retail tenants such as Vaughn-at-Sather Gate, Inc. and Snappy Foto indicate that they could lose clientele if new locations were in an area with fewer pedestrians. Some businesses expressed an interest in occupying space in the proposed building; this would involve a temporary closure of their business, moving to a temporary location, during construction of the proposed project. Tenants also expressed the concern that rents for comparable space in the proposed building would be too expensive.

Healey and Associates, an advertising firm, states that it might move out of San Francisco if displaced from the project site. Should this business relocate outside of San Francisco, an estimated 7 jobs would be eliminated in San Francisco. No other tenants indicate that they would anticipate closing or relocating outside of San Francisco if displaced from the project site. The retention of small business firms in San Francisco is a goal of the Mayor's Office of Economic Development. This Office, through its Neighborhood Business Revitalization program, provides relocation advice and loan assistance to displaced firms./6/

Assessed Valuation and Property Taxes. The fair market value of the project would be estimated at \$27.0 million (in 1979 dollars). A table titled "Estimates of Project Value and Property Tax," containing the calculations on which this estimate is based, is on file at the Department of City Planning, Office of Environmental Review. The property would have an estimated \$6.75 million assessed value, and would generate between \$270,000 to \$337,000 total property tax revenues annually (in 1979 constant dollars). Appreciation of land value and escalation of construction costs is expected before fiscal year 1982-1983; however, estimates are given in constant dollars. Both the low and the high tax estimates assume the existing tax structure, full occupancy, and appraisal of market value based on income potential. The low estimate is based on a tax rate of \$4 per \$100 assessed value. The high estimate is based on a tax rate of \$5 (the \$4 maximum composite tax rate allowable under Proposition 13 plus the \$1 tax rate for previously approved San Francisco bond debt). The 1979-80 rate is \$4.97.

Assuming the City and County were to receive the same proportion of property taxes as this fiscal year, it would receive between \$229,500 and \$286,500 (85% of the total \$270,000 to \$337,000 composite property tax revenues).

Subtracting the assessed value of the existing land and improvements on the block which total \$385,600 million, the net addition to San Francisco's property tax base would be \$6.4 million. The net increase over existing composite property tax revenues to the City and County of \$16,300 (see Appendix E, Table E-1, p. 156) would be between \$229,500 and \$270,200.

- Assuming average gross receipts of \$150 per net sq. ft. for similar new retail space, 7/ the 8,300 net sq. ft. of retail use at the Daon Building would generate an estimated \$81,000 in sales tax revenues. The City and County would receive about \$15,000 in sales tax revenues and BART would receive about \$6,000. Based on an estimated \$1.1 million of taxable purchases by the Daon Building employees, the site would generate an estimated \$11,000 in indirect sales tax to the City and County and \$6,000 to BART. The estimated payroll expense tax generated from the project site would be about \$97,000. (A table showing assumptions and calculations of the payroll expense tax is available for public review at the Department of City Planning, Office of Environmental Review.) Only as space at the Daon Building and vacated space elsewhere in the City is taken by employees entering the labor market in San Francisco

would the availability of new office space at the Daon Building be said to generate incremental (net) new business tax revenues (see the Cumulative section below).

Costs and Net Revenues. Water and sewer operating cost increases would be covered by user charges. Office development in downtown San Francisco does not increase the capital costs required for an upgraded sewer system designed to meet federal legal requirements, because the existing sewer mains that would serve the site and the capacity of the planned sewage treatment facilities are sized for wet-weather flows which are in excess of the City's average daily dry-weather flows. Public safety costs would not increase in proportion to increases in Downtown daytime population or increases in property value of the block (see IV.D, p. 61). Some increases in general government administrative costs could be expected with the increased intensity of uses on the block. Street-related costs, such as maintenance, storm drainage, lighting, and cleaning, would not be measurably affected.

- City and County costs attributable to the site can be viewed as the site's proportion of increased costs attributable to Downtown cumulative commercial growth. Increased City and County property taxes (\$229,500 to 270,200) and payroll/business taxes (\$74,400), plus user charges and continuing sales taxes from the project site would offset incremental (marginal) costs to the City and County of providing police, fire, water, sewer, general administrative and street-related services for the project site.

According to the San Francisco Unified School District (L. Eickert, Business Manager, telephone communication, 27 November 1978), Downtown office development would have no direct net effect on school expenditures, but would increase the proportion of total school expenditures financed by the property tax.

- Muni would incur cost increases to provide service to the Daon project. Muni currently estimates an average paid passenger fare deficit of \$0.45, including the recent fare increase to \$0.50 effective 1 April 1980. (D. Cole, Grants Administrator, San Francisco Municipal Railway, telephone communication, 28 March 1980). The \$0.45 fare deficit is made up by City ad valorem taxes and State and Federal subventions. Muni does not anticipate a decrease in this

deficit in the near future, because planned improvements such as the Muni Metro system will increase future costs in proportion to increased passenger ridership. Muni does expect, however, that the portion of the fare deficit covered by State and Federal subvention will increase, thereby decreasing the portion of the deficit borne by San Francisco taxpayers (L. Elliot, Cost Accountant, San Francisco Municipal Railway, telephone communication, 8 January 1980).

- Under worst-case Muni ridership conditions, the Daon project would generate an estimated 1200 Muni trips per day, resulting in a total annual Muni operating deficit of \$141,000 attributable to the Daon project. This would represent a net increase of \$114,000 over the existing Muni per-paid-passenger fare deficit of \$27,000 currently resulting from the proposed project site. Project-generated property and payroll tax revenues would accrue to the City's General Fund from which Muni receives part of its annual operating budget. The estimated \$303,909 to \$344,600 of property and payroll taxes generated from the Daon building would be available to meet the portion of the fare deficit (\$56,000 or 40%) paid for from the City's General Fund. The remaining fare deficit of \$85,000 would be met by local, state and federal subventions.
- According to estimates of project-generated Muni ridership (see IV.F, p. 80), Muni lines serving the site in 1981 would be operating at 63% of total seated and standing capacity (averaged over the 1-hour peak). Muni would not be expected to have to add buses or increase capital outlay costs beyond planned increases in service and capital costs to provide peak-hour service to riders from the project. The planned increases over existing Muni capital costs are based on the additional capacity that would be required to provide service to cumulative Downtown development, including the Daon project. A methodology for determining an individual project's proportionate share of those additional Muni capital costs has not been developed at this time (L. Pio, Transit Environmental Coordinator, Public Utilities Commission, Utilities Engineering Bureau, formerly San Francisco Municipal Railway Transit Improvement Program, telephone communication, 8 May 1980).

About 640 trips on BART would be generated each week-day by the proposed project. At the existing average deficit per trip of \$1.25,/8/ this would result in an annual deficit of about \$209,000. The direct sales tax revenues

from retail sales at the site and indirect sales tax revenues from purchases in San Francisco by workers at the Daon Building would partially cover this annual deficit. Eventually, BART plans to increase capacity by extending the lengths of trains or by running more trains (reduced headway time), which would also increase ridership. Under these conditions, the average deficit per commuter would decrease and added costs would be negligible in relation to increased fare revenue. With respect to capital costs, the increased tax base attributable to the project, on which fixed cost BART bond taxes are levied, would enable future bond taxes on existing property elsewhere in San Francisco to be reduced (W. Belding, Senior Economist, BART, telephone communications, 9 September 1978 and 4 May 1979).

CUMULATIVE AND INDIRECT ECONOMIC AND FISCAL IMPACTS

Downtown Office Space. Past trends indicate that new Downtown office space is likely to be built and absorbed at a much higher rate than citywide office employment growth. This is due to increased space per employee and relocations to Downtown from elsewhere in San Francisco./9/ This project plus the 5 high-rises which are under construction, and the other 4 which have been applied for or are in design, totaling 5.7 million sq. ft. (see Appendix E, Table E-2, p 157), would represent an estimated 4-year supply of office space, assuming absorption at the historic 1970-79 construction rate of 1.54 million gross sq. ft. per year, or an 5-year supply if the absorption rate should decline to the 1960-69 rate of 1.03 million gross sq. ft. per year. Due to existing demand caused by the current shortage of office space, it is possible that the absorption rate would be higher than either historic rate. If all these buildings were to be completed in the early 1980's, there could be a short-term cumulative impact of oversupply. The oversupply, if it should occur, could have the additional effect of preempting or slowing office development elsewhere in the City, such as the northern Waterfront or South of Market St. areas. The following is quoted from the 1977 Yerba Buena EIR, Appendix D, p. 34-5. (The words underlined are revised in line with more recent data.)

"According to estimates by the Department of City Planning the financial and administrative district (C-3-0 zoning district), which allows the

highest floor area ratios in the City, has a theoretical capacity to accommodate 30+ million sq. ft. of new office space, in addition to the 6+ million sq. ft. available in Yerba Buena Center. Even if site clearance or parking requirements reduce this theoretical capacity in half--to 15 million sq. ft.--the 6+ million sq. ft. in YBC, and this 15 million sq. ft. in other parts of San Francisco represent a 14-21 year supply of available high-density office space within the downtown district and YBC at recent absorption rates (1.0 to 1.5 million per year). As pointed out in the Arthur D. Little report to the San Francisco Department of City Planning in 1975, 'These facts suggest the possible desirability of restraining growth north of Market St. in order to accommodate new growth on land already prepared for development in the YBC project area. This strategy would reduce the necessity for demolition and reconstruction in the downtown, and maximize the fiscal benefits derived from construction of new buildings on vacant land'."

- Displacement of small service-oriented firms in the Downtown could also encourage conversion and rehabilitation of vacated older warehouse and light industrial space in San Francisco and vacated older office space outside of the Downtown (W. Evers, Mayor's Office of Economic Development, telephone communication, 8 November 1978). Secondary dislocation effects, such as reduced rents and higher vacancies, could also occur in older downtown offices because the demand for older pre-war office space would decline relative to the demand for newer high-rise office space. As various firms upgrade to relatively high-rent spaces vacated in high-rises built in the 1960s and early 1970s, secondary vacancies could occur in older, pre-war buildings. Reduced rents and/or higher vacancy rates in these older buildings could lead to postponement of necessary repairs or "deferred maintenance" as landlords' incomes decrease and their costs remain relatively constant.

Fiscal. Up until the passage of Proposition 13, revenues generated to the City and County from Downtown commercial development could be expected to cover incremental City and County costs to provide services. Proposition 13 decreases property tax revenues by limiting property taxes to 1% of market value and by limiting the annual increase in property taxes to 2%, unless property is sold and reappraised.

Based on the SPUR study, the Downtown San Francisco Conservation and Development study states that, in the short run, initial revenues from new Downtown construction would be expected to exceed public costs to serve these projects. However, in the long run, as municipal costs continue to rise and

property taxes are limited to a 2% per year increase, the initial net surplus would eventually not be able to cover costs, resulting in a net deficit./10/

The single most important cost consideration for new Downtown development is funding for public transit. Cumulative office development could cause increased capital costs for transportation facilities, both public and private. Transit systems are supported by fares and state and federal subventions derived primarily from state and federal gas taxes. The remaining costs are financed locally by sales taxes which (with fares) are the primary support for BART operating costs, and by property taxes which are the primary support for Muni and the source of funding for debt service on BART capital costs. It has been suggested that "vehicle congestion is a threshold factor . . . should the 1990 maximum growth level become a reality"./11/ This "threshold factor" would determine the requirement for new capital improvements to transportation systems - such as extension of BART to the Peninsula or a second deck on the Golden Gate Bridge. Until a public determination that this "threshold" has been reached, the "costs" of congestion due to private vehicles would be borne privately in the form of delays, and vehicle-related costs, including air pollution./12/

NOTES - Economic Aspects

/1/ K. Usher, Senior Vice President, Cushman and Wakefield, telephone communication, 1 March 1979.

/2/ San Francisco Department of City Planning, Final Environmental Impact Report, 180 Montgomery Street Building, EE 76.162, July 1977.

/3/ A summary of the survey findings are presented in San Francisco Planning and Urban Renewal Association, June 1975, Detailed Finding: Impact of Intensive High Rise Development in San Francisco, Final Report, pp. 262-263, Table 68. Hereinafter referred to as SPUR.

/4/ J. Singer, Project Manager, Swinerton and Walberg Construction Company, telephone communication, 2 February 1979.

/5/ Two construction employment multipliers, 2.0 and 1.9, have been used for downtown commercial office projects in San Francisco. These multipliers have been derived independently by 2 San Francisco-based economic consulting firms. The 2.0 construction employment multiplier was derived by Lord and LeBlanc and is contained in:

- City and County of San Francisco, Department of City Planning, Final Environmental Impact Report: Yerba Buena Center, EE 77.220, 6 January 1978, Appendix D., Economics, p. 40cc, and;

the 1.9 construction employment multiplier was derived by Gruen, Gruen and Associates and is contained in:

City and County of San Francisco, Department of City Planning, Draft Environmental Impact Report: Bank of Tokyo of California Building, EE 74.170, 24 January 1975, p. 41.

These multipliers should be considered as rough indicators of the number of secondary jobs that could result from project construction employment.

An employment multiplier is a quantitative expression of the extent to which a change in local production induces an overall change in employment. The construction multiplier as stated in this report means that, for each person employed as a result of a project, additional regional employment opportunities would be generated by his or her demand for goods and services.

/6/ G. Oliver, Project Manager, Mayor's Office of Economic Development, telephone conversation, 27 October 1978.

/7/ C. Nicholas, Former Director of Retail Leasing, Cushman and Wakefield, telephone communication, 19 April 1979.

/8/ Muni and BART average deficits per trip should not be cross-compared because each agency has its own cost-accounting methodology and considerations. Each deficit figure has been independently derived by the agency using cost and revenue assumptions unique to each system.

/9/ Based on past trends, SPUR projections from 1974 to 1990 varied by a factor of 3 for new office space (from 10 to 30 million sq. ft. absorption), but by a factor of only 2 (from 49,000 to 87,000 more office workers) for increased employment.

/10/ Sedway/Cooke, October 1979, Downtown San Francisco Conservation and Development Planning Program, Phase I Study, pp. 56-58.

/11/ SPUR, op. cit., p. 8.

/12/ SPUR, op. cit., pp 277-316.

● F. TRANSPORTATION, CIRCULATION AND PARKING

● DEMOLITION, EXCAVATION, AND CONSTRUCTION

During the estimated 19-month construction period, transportation impacts would result from trucking movements to and from the site during demolition, excavation, and construction. Demolition activity would generate an average of 36 truck movements per day in and out of the project site over an 8-week period./1/ Excavation would generate an average of 14 truck movements per day over a 10-week period. Construction activity would require an average of 20 truck movements per day over a 65-week period to deliver glass, stone, concrete and steel. Trucks would enter the site from Halleck St. and would exit via Battery St. The demolition and excavation trucks would haul materials to an undetermined disposal site on the Peninsula and would most likely use the freeway ramps at Main and Beale Sts. The truck traffic could also use the freeway ramps at Washington and Clay Sts; traffic congestion on Front St. between Sacramento St. and Clay St. may preclude use of Clay St. by the truck traffic.

The trucks would increase traffic congestion on the access streets and haul routes. Truck traffic from 7 a.m. to 9 a.m. and 4 p.m. to 6 p.m. would conflict with peak-hour traffic. During demolition and excavation, street traffic on Battery St. would be interrupted when trucks leave the site, particularly during the morning peak hour. Increased traffic congestion caused by trucks operating on transit preferential streets would impact transit schedules by causing delays to transit vehicles. Trucks would also impede morning traffic eastbound on the James Lick Freeway when moving into

the left lane to enter the Embarcadero Freeway. Evening peak-hour traffic would be slowed by trucks moving up the Beale St. on-ramp to the James Lick Freeway or Bay Bridge. No disruption of street traffic would result from on-site, construction-related activities.

Construction traffic from other buildings under construction in the project vicinity during the same period as the project would compound the effects of the construction traffic from the proposed project. Due to probable changes in construction schedules of proposed buildings, it is not possible to determine which of the other buildings now proposed would be under construction at the same time as the proposed project.

● PROJECT TRAVEL DEMAND

An estimate of the amount of travel associated with the 2 categories of leasable building space was computed using the following trip generation factors: 3.5 person trip-ends per office employee, and 30 person trip-ends per 1,000 sq. ft. of retail space./2/ A trip-end is a 1-way trip from an origin (home, for example) to the proposed project, or a 1-way trip in the reverse direction. A total of about 4,365 person trip-ends per work day is anticipated.

The travel demand was assigned to modes on the basis of work and non-work trips. As a result of the mix of uses in the building, all of the office use trips were considered as work trips, although the generation rates include non-work trips as well. The retail use trips were considered entirely as non-work travel, although the generation rates include work travel for the retail uses. The assumption was made that this method of assigning the travel would be self-compensating in that the work trips by retail employees would be grouped with the office generation and the non-work trips from the office uses would be grouped with the retail generation. This analysis was assumed to be conservative, as all of the trips were considered to be primary trips (from outside of the project to the project and the reverse) when, actually, secondary trips would occur (i.e., trips wholly internal to the project)./3/

Service-vehicle trips have been assumed to occur at the rate of 0.23 service-vehicle trips per 1,000 sq. ft. of gross floor area./4/ At this rate

the project would generate 65 service-vehicle trips per weekday. Averaged over an 8-hour working day, the project would generate an average of 8 service-vehicle trips per hour. Service-vehicle trips are included in total trips given in Table 11.

Of the total 4,365 person trip ends generated, it is estimated that about 2,675 would be by transit, 1,590 by automobile and 100 by walking as a primary mode of transportation (see Table 11).^{5/} The walk column in Table 11 shows both secondary and primary walk trips. As no parking would be provided, all persons would be required to walk onto the site.

● TABLE 11: ESTIMATED 24-HOUR WEEKDAY TRAVEL DEMAND GENERATED BY THE DAON BUILDING*

<u>Area of Residence</u>	<u>%</u>	<u>Total</u>	<u>Auto</u>	<u>Transit</u>	<u>Walk**</u>
North Bay	13	585	340	245	585
Peninsula	17	730	330	400	730
East Bay	26	1,150	390	760	1,150
San Francisco	44	1,900	530	1,270	1,990
TOTAL	100	4,365	1,590	2,675	4,365

*Retail and office person trip-ends.

**About 100 person trip-ends would result from persons walking to and from the site who would not use any other form of transportation.

SOURCE: TJKM, Transportation Consultants; see note #5, p. 88.

The 24-hour automobile travel generated by the expected project tenants was analyzed. For each of the 7 geographic areas considered (North Bay, East Bay, Peninsula and San Francisco divided into 4 sections), an average trip length was estimated and the vehicle-miles travelled were calculated. The total vehicle-miles of travel generated by the project are estimated to be 17,200 vehicle-miles per day with an average trip length of 15.1 miles 1-way.

● TRAFFIC IMPACTS

In assessing the new traffic which would be generated by the project in relation to other traffic expected to be on the streets in 1981, the expected

year of completion, an expansion factor of 1.0% per year was used to increase the known 1978 traffic volumes to expected 1981 base levels. This annual expansion rate was recommended for use by the Bureau of Traffic Engineering, City and County of San Francisco Department of Public Works./6/ Since growth factors are based on historical trends, traffic projections using growth factors are contingent upon the availability of sufficient future street capacity. Thus, when peak-hour traffic volumes grow to equal the capacity of a street, further growth in vehicular flow would not be possible. Consequently, either the peak hour would expand to include other hours, some of the traffic would switch to nearby streets, or there would be a shift to modes of travel other than the automobile.

Table 12 shows the 1981 projected base volumes on streets near the proposed project, the increases in traffic volumes estimated to be caused by the proposed project, and the percent of the peak-hour increase over the 1978 base level which would be caused by the project. Project-induced increases on the surrounding streets would range from about 3% on Battery St. to about 8% on Beale St.

The effect of the project on the capacity of nearby intersections during the peak-hour in terms of volume-to-capacity ratios is shown in Table 13. The Mission St. intersections with Beale St. and Main St., the intersection of Battery and Washington Sts., and the intersection of Clay St. and Front St. would operate at Level of Service C or above for the 1981 Base condition. The project would increase the volume-to-capacity ratios slightly at each of the intersections, but would not cause a change in Level of Service; it should be noted that calculations are accurate only to within 10%. Vehicle speeds in the project vicinity would decrease as the additional project-generated traffic is added to the street system, but would not decrease below an average 15 miles per hour.

● PARKING IMPACTS

The daily parking demand which would be generated by the project is estimated to be about 420 parking spaces. The parking demand has been calculated based on the number of auto driver work and non-work trips projected./7/ The average percentage of non-work trips for multi-tenanted buildings is estimated

TABLE 12: PROJECTED 1981 VEHICLE VOLUMES ON STREETS NEAR PROJECT

Street*	EXISTING (vehicles)			1981 BASE (vehicles)			1981 BASE + PROJECT (veh.)			% of Increase Per Peak Hour Due to Project***
	24 Hour	Peak		24 Hour	Peak		24 Hour	Peak		
		Hour**	8 Hour		Hour**	8 Hour		Hour**	8 Hour	
Beale	8,000	980	4,800	8,200	1,010	4,900	8,500	1,090	5,100	7.8
Main	13,400	1,520	7,980	13,800	1,570	8,200	14,100	1,650	8,400	5.0
Clay	29,200	2,920	16,370	30,100	2,360	16,900	30,400	2,440	17,100	3.3
Washington	15,600	1,970	9,380	16,100	2,030	9,700	16,400	2,110	9,900	3.9
Battery	14,700	1,420	8,510	15,100	1,460	8,800	15,300	1,500	8,900	2.7

*The section of each street is shown in Table 4, p. 35.

**The single peak hour during the peak period between 4:00 and 6:00 p.m., except for Washington and Main Sts. where the peak period is between 7:00 and 9:00 a.m.

***Percent increase over the 1981 base traffic volume.

SOURCE: See Appendix F, p. 158.

TABLE 13: PROJECTED 1981 PEAK-HOUR INTERSECTION VOLUME-TO-CAPACITY RATIOS*

Intersection	Critical Approach		Critical Approach		Critical Approach	
	Existing	(Direction)	1981 Base	(Direction)	1981 Base + Project	(Direction)
Clay and Front	0.64	Eastbound	0.66	Eastbound	0.68	Eastbound
Battery and Washington	0.65	Westbound	0.66	Westbound	0.68	Westbound
Mission and Beale	0.80	Eastbound	0.82	Eastbound	0.83	Eastbound
Mission and Main	0.83	Northbound	0.85	Northbound	0.87	Northbound

*Service-volume capacities for these intersections are shown in Table 5, p. 36.

SOURCE: See Appendix F, p. 158.

to be 22% (this corresponds closely to the non-work percentage assumed in the travel demand analysis)./4/ The average length of stay for non-work trips is estimated to be 1.4 hours./4/ To estimate the work parking demand, all of the auto driver work trips were assumed to generate demand for 1 parking space per trip or about 400 spaces. The non-work parking demand was calculated by dividing the non-work auto driver trips by a turnover factor based upon the average length of stay. The turnover factor was calculated by dividing an 8-hour working day by the average length of stay of 1.4 hours to give a factor of 5.7. Thus the non-work parking demand was calculated to be 22 spaces and the total demand is estimated to be about 420 spaces. The project would not provide any offstreet parking, leaving a deficit of about 420 project-related spaces. Parkers would be expected to use other facilities outside of the study area, particularly south of Market St.

Objective 1, Policy 7 of the Plan for Transportation (for full text of objectives and policies discussed, refer to the Revisions to the Transportation Element of the Master Plan Regarding Parking, City Planning Commission Resolution 7647, 20 January 1977) encourages such devices as staggered work hours to reduce "peaking of travel during (peak) hours". Objective 1, Policy 10 of the revised Downtown Transportation Plan states "Develop the Downtown Core as an automobile control area". Objective 1, Policy 4 states "Discourage the addition of new long-term parking spaces in and around Downtown, limit the amount of new spaces to that which cannot be reasonably accommodated by transit and locate long-term facilities in areas peripheral to the Downtown Commercial District". The project site is within the Downtown Core as mapped (Map A) in the revised Downtown Transportation Plan. As no off-street parking would be provided, the project would be in compliance with the revised Downtown Transportation Plan.

● TRANSIT IMPACTS

An assessment of the transit impacts of the project was conducted by adding the project-generated increases to the conditions expected to occur in late 1981 when the building would be completed. The 1981 base conditions were projected using growth factors for transit patronage based upon past system operating records. A separate growth factor was applied to each transit agency similar to the method used in the traffic analysis (for further

discussion, see Appendix F, p. 163). Table 14 shows the 1981 base levels and the project-generated transit trip ends. The percent of total 1981 capacity used by the projected demands are also shown. Planned increases in capacity by Muni Metro, BART and the Golden Gate Transit Ferry were considered (see Appendix F, p. 164). The project-generated increases would not statistically lessen the level of operation of the various transit agencies involved. If the planned capacity increases did not occur, the capacities shown in Table 7, p. 41 for the affected agencies would be expected to remain in effect. Division of Table 14 ridership by Table 7 capacities would give the percent occupancy conditions resulting from no capacity increases.

The Muni 5-Year Plan, currently being implemented, would change the route characteristics of the Muni lines considered in the transit analysis. The J, K, L, M and N streetcar lines would be moved underground into the Market Street Subway and become the Muni Metro system. Vehicle capacity would be increased when the streetcars are replaced by the Metro Light Rail Vehicles (see Appendix F, p. 164). Other capacity changes would occur on the 38-GEARY and 38L-GEARY LIMITED when the existing motor coaches are replaced by articulated coaches as proposed by the 5-Year Plan. The 38X-GEARY EXPRESS is proposed to be changed to the 38AX and the 38BX which would provide zoned express service to the areas now served by the 38X. The 41-UNION trolley coach line would be moved to Stockton St. and would replace the 45-GREENWICH line which would be discontinued. The existing route of the 41-UNION would be used by a new line, the 20-COLUMBUS, and by the 45X-GREENWICH EXPRESS (peak hours only). The 1-CALIFORNIA would be extended into the project area and would provide service to the Transbay Terminal. The downtown portion of the 72-SUNSET line would be discontinued upon implementation of the Muni Metro Service. Lines 5, 6, 7, 8, 31, 71 and 61 would continue to use the existing routes with relatively few changes. The 62-CALIFORNIA-HYDE, a new cable car line going from the Ferry Building to Hyde and Beach Sts. has been proposed. The changes would affect the ridership distribution on the lines analyzed. The Muni Metro capacity increases have been considered in the transit analysis. The other changes proposed in the 5-Year Plan would increase the availability of transit service in the project area beyond that shown in the analysis.

TABLE 14: 1981 PROJECTED TRANSIT CHARACTERISTICS - P.M. PEAK-HOUR OUTBOUND ONLY

Agency	EXISTING		1981 BASE*		1981 BASE + PROJECT	
	Ridership	% Occupancy	Ridership	% Occupancy**	Ridership	% Increase***
Muni	13,560	81	16,580	62	16,760	1
BART						
Transbay	7,600	76	8,880	76	8,960	1
Westbay	5,900	71	6,890	69	6,930	1
A-C Transit	8,590	70	8,590	70	8,660	1
Sam Trans	610	63	740	76	750	1
SPRR	4,300	39	5,250	48	5,290	1
Golden Gate						
Motor Coach	4,480	69	5,240	81	5,280	1
Ferry	1,190	57	1,390	49	1,400	1
Harbor						
Carriers	345	49	400	58	403	-

*The 1981 Base condition is expanded from 1978 ridership through the use of growth factors (see Appendix F, p. 158).

**Percent of total capacity occupied; capacity increases have been included in 1981 Base and 1981 Base + Project.

***Percent increase in ridership of 1981 Base + Project over 1981 Base.

SOURCE: See Appendix F, p. 158, and Table 7, p. 41.

● PEDESTRIAN IMPACTS

The project population would increase the amount of peak-hour pedestrian travel on the sidewalks surrounding the project site. The project would add about 140 pedestrians per hour to the existing flows on Sacramento and Battery Sts. The sidewalks surrounding the project site would be wide enough to accommodate the increased flows, as shown by the unchanged levels of service in Table 15.

● TABLE 15: PEDESTRIAN IMPACTS OF PROJECT, AFTERNOON PEAK 15-MINUTE PERIOD

<u>Sidewalk</u>	<u>Volume*</u>		<u>Total</u>	<u>Rate**</u>	<u>Level of Service***</u>
	<u>Existing</u>	<u>Projected Increase</u>			
Battery	330	140	470	3	A
Sacramento	80	140	225	3	A

*Number of pedestrians during a 15 minute period.

**Pedestrians per foot of sidewalk width per minute.

***Level of Service is measured at mid-block. For definition of Levels of Service, see Appendix F, Table F-2, p. 160.

SOURCE: TJKM, Transportation Consultants

The morning pedestrian volumes generated by the project would be comparable to the afternoon peak, although not as intense. Noon-hour flows from the project would be lower than peak-hour flows and would be more uniformly distributed over the sidewalks fronting the site. The main impact of the increased pedestrian flows would be longer queues at the crosswalks. The walking distances from Battery St. to Sacramento St. would be shortened by the open pedestrian way through the first floor of the building.

● CUMULATIVE TRAFFIC IMPACTS

As Downtown San Francisco is currently experiencing an increase in office-building floor area, the Department of City Planning has initiated an analysis of the cumulative traffic impact in the vicinity of the project. A list of the buildings completed and approved since 1976 or now subject to environmental review which are included in the analysis and a description of the methodology used in this report is included in Appendix F, p. 161.

The 4 streets which serve as feeders to or from freeway ramps (Main, Beale, Clay and Washington Sts.) are the points of maximum automobile traffic concentration in the Financial District. They would determine the worst-case, or greatest traffic impacts. Impacts on other streets would be less, as traffic would be more dispersed. The projected traffic volumes for 1981 are shown in Table 16. Cumulative traffic would increase peak-hour volumes on the streets analyzed by from 40% to 163%; these are statistically significant changes./8/ The percentage increase caused by the project above the cumulative traffic is estimated to be not more than 3% on any of the freeway approach streets; this is not a statistically significant change./8/

The cumulative impact on peak-hour street capacities is shown in Table 17, p. 85. Cumulative traffic would decrease the Level of Service at the intersections of Mission St. with Beale St. and Main St. from C to F (jammed) conditions. The Level of Service at the intersection of Clay and Front Sts. and at the intersection of Battery and Washington Sts. would not decrease below C. The impact of the project in relation to the cumulative impacts would be a marginal lessening of the level of traffic operation on the street system.

● CUMULATIVE PARKING IMPACTS

The parking demand for each of the projects included in the cumulative analysis, as derived from the EIR's cited in Appendix F, p. 158, and the loss or gain of parking spaces since 1976 in the area bounded by Jackson St., Sansome St., Market St. and The Embarcadero (see Figure 18, p. 34), were

TABLE 16: CUMULATIVE TRAFFIC IMPACTS IN 1981

Street	EXISTING Vehicles		1981 BASE* Vehicles		1981 BASE + CUMULATIVE Vehicles		% Increase***		1981 BASE + CUMULATIVE + PROJECT Vehicles		% Increase +	
	24-Hr	Peak Hr**	24-Hr	Peak Hr**	24-Hr	Peak Hr	24-Hr	Peak Hr	24-Hr	Peak Hr	24-Hr	Peak Hr
Beale	8,000	980	8,000	1,040	14,000	2,720	74	163	14,300	2,800	2	3
Main	13,400	1,520	13,700	1,560	19,200	3,100	41	99	19,500	3,180	2	3
Clay	29,800	2,920	29,800	2,340	32,700	3,190	12	42	33,000	3,270	1	2
Washington	15,600	1,970	15,900	2,010	19,500	2,820	23	40	19,900	2,900	2	3

*Base = Expanded 1976 vehicle volumes (see Appendix F, p. 158).

**The peak hour for Beale and Clay Sts. occurs during the peak period between 4:00 and 6:00 p.m. The peak hour for Main and Washington Sts. occurs during the peak period between 7:00 and 9:00 a.m.

***Percent increase of 1981 + cumulative over 1981 Base; percent increase may not be directly derived from Table due to rounding. The percent increases represent the fractional change over the comparison volume. The percent increase was calculated by dividing the incremental increase between 2 conditions by the earlier condition, i.e., (1981 Base + cumulative - 1981 Base) divided by 1981 Base x 100% = percent increase of 1981 Base + cumulative over 1981 Base.

+Percent increase of 1981 + cumulative + project over 1981 + cumulative; percentages may not be directly derived from Table due to rounding.

● TABLE 17: CUMULATIVE TRAFFIC IMPACTS - PROJECTED PEAK-HOUR*
VOLUME-TO-CAPACITY RATIOS**

Street	Existing	1981 Base	1981 Base + A***	1981 Base + A + B****
Clay and Front	0.64	0.65	0.84	0.86
Battery and Washington	0.65	0.66	0.80	0.82
Mission and Beale	0.80	0.81	1.03	1.05
Mission and Main	0.83	0.84	1.10	1.12

*The peak hour for Beale and Clay Sts. is during the p.m. peak period.

Peak hour for Main and Washington Sts. is during the a.m. peak period.

**This is the existing or projected volume/service volume ratio at Level of Service E (see Appendix F, Table F-1, p. 162 for definition of the Levels of Service).

***A = Cumulative buildings addition.

****B = Proposed Daon building addition.

SOURCE: TJKM, Transportation Consultants

compiled to produce the demand and deficit figures shown in Table 18. It is estimated that the cumulative impact would produce a parking deficit of about 7,020 spaces in 1981. Eleven of the 20 buildings analyzed would provide no off-street parking. It is estimated that the project would increase the parking deficit by approximately 6% over the cumulative condition; this is not a statistically significant increase./8/

● CUMULATIVE TRANSIT IMPACTS

An analysis was made, parallel to the cumulative parking and traffic analyses, of the cumulative transit impacts due to development in Downtown San Francisco (see Appendix F, p. 163). The transit analysis covered the peak 1-hour during the peak period for each agency. During the peak-hour, the demand on individual routes varied from less than seated capacity to total capacity. Based on existing transit data it is reasonable to assume that, for short

● TABLE 18: CUMULATIVE PARKING IMPACTS - PROJECTED OFF-STREET
PARKING DEMAND IN 1981

	<u>Cumulative</u>	<u>Daon Building</u>	<u>Cumulative Plus Daon Building</u>
Available Spaces in 1976	570 spaces	570 spaces	570 spaces
Net gain (loss) of 1976 spaces	(60) spaces	(60) spaces	(60) spaces
Available Spaces in 1981	510 spaces	510 spaces	510 spaces
Projected Parking Demand	7,530 spaces	420 spaces	7,950 spaces*
Net Parking Surplus (Deficit)	(7,020) spaces	(150) spaces	(7,440) spaces

*Not counting that from growth other than the projects considered in the cumulative traffic analysis.

periods of time (15 to 30 minutes), certain routes experience loadings nearer to 100% of total capacity than the loadings shown in Table 19. The loadings shown are the results of summing ridership of full vehicles with partially empty vehicles, thus equalizing the loads over the 1-hour period. As the cumulative demand increases, the length of time of peak loadings will increase, thus forcing a spreading of peak-of-the-peak conditions over time. It is not possible to quantify the extent to which peak-of-the-peak conditions would be increased, because the bunching of transit vehicles varies from day to day. The routes most likely to be overloaded for short periods are the Muni lines, the Golden Gate Transit Motor coaches and BART transbay trains.

The only agency projected to operate at greater than 90% of total capacity during the 1-hour peak period is SamTrans. The disproportionate overrun of the SamTrans capacity is due to the newness of the service, resulting in a lack of historical growth data which could be used for accurate growth projections. The method of increasing the capacity of the transit systems for the 1981 analysis made in this EIR considered only definite capacity increases (i.e., well documented). SamTrans is currently operating at approximately 60% of total capacity on the mainline routes, clearly covering the demand. The

TABLE 19: 1981 PROJECTED CUMULATIVE TRANSIT CHARACTERISTICS - P.M. PEAK OUTBOUND ONLY

Agency	EXISTING		1981 BASE*		1981 BASE + CUMULATIVE		1981 BASE + CUMULATIVE + PROJECT	
	Riders	% Occupancy	Riders	% Occupancy**	Riders	% Occupancy**	Riders	% Increase+
MUNI	13,560	81	15,950	60	22,890	86	23,070	87
BART								
Transbay	7,600	76	7,750	66	9,790	84	9,880	85
Westbay	5,900	71	6,020	61	7,270	73	7,310	74
A-C Trans.	8,590	70	8,590	70	9,910	80	9,970	81
SamTrans++	610	63	630	64	1,830	188	1,840	189
SPRR	4,300	39	4,460	41	5,110	46	5,140	47
Golden Gate								
Coach	4,480	69	4,580	71	5,460	84	5,500	85
Ferry	1,190	57	1,220	43	1,440	51	1,450	51
Harbor Carriers	345	49	350	50	380	54	380	54
								0

*Base = Expanded from 1978 ridership through the use of growth factors (see Appendix F, p. 158, and Table 7, p. 41).
 **Percent of total capacity occupied; planned capacity increases have been included in 1981 Base, 1981 Base + cumulative, and 1981 Base + cumulative + project.
 ***Percent increase in ridership of 1981 Base + cumulative over 1981 Base.
 +Percent increase in ridership of 1981 Base + cumulative + project over 1981 Base + cumulative.
 ++See Traffic Note 8, p. 89.

IV. Environmental Impact

analysis of the 1981 Base + Cumulative occupancy added all of the cumulative transit trips in a lump sum which had the effect of tripling the existing ridership and creating an apparent, artificial capacity shortage. As the cumulative projects would be spread over time, the increases in demand would be gradual and SamTrans would be expected to increase capacity to meet increased demand on a gradual basis./9/

NOTES - Transportation and Parking

/1/ Construction information supplied by D. Capron, Director of Technical Services, Daon Corporation, Memo, 16 February 1979.

/2/ The trip generation factors and distribution percentages were developed from published data contained in the following reports: California Department of Transportation (CalTrans), District 04, 1966-76, Trip End Generation Research Counts Progress Reports, Repts. 1-11; Institute of Transportation Engineers (ITE), 1976, Trip Generations, ITE Information Report; National Cooperative Highway Research Program (NCHRP), 1969, Urban Travel Patterns for Hospitals, Universities, Office Buildings, and Capitols, Rept. No. 62; NCHRP, 1971, Projection of Highway Utility, Trip Generation Vocabulary, Rept. No. 121; TJKM, 1974, City of Sausalito Comprehensive Traffic Study.

/3/ The secondary trip making would be trips from the office uses to the retail uses and would not contribute to the impact of the project on the transportation system.

/4/ This rate is from data published in National Highway Cooperative Research Program Report No. 62 (see /2/ above).

/5/ The modal split information and the geographic distribution percentages used for work trips were averages of previous studies prepared for office buildings in the downtown area. The geographic distribution percentages are averages from 4 employee surveys (Levi Strauss, Crocker Bank, ITEL, and Federal Reserve Bank) and 2 modelling studies (456 Montgomery Street EIR, EE 79.178, and MTC SCVCE, 1975). The modal split percentages are averages from previous environmental impact studies summarized in Attachment 2 to Guidelines for Environmental Impact Review, Transportation Impacts, prepared by the Department of City Planning. The modal split information and geographic distribution percentages for the non-work trips were developed by TJKM based upon 1980 projections from the Bay Area Transportation Study Commission (BATS) Technical Report No. 2267. BATS was the last comprehensive regional transportation study and planning agency. Appendix F, Tables F-3 and F-4 show the geographic distribution averages and the modal assignments.

/6/ Scott A. Shoaf, Associate Traffic Engineer, Bureau of Traffic Engineering, San Francisco Department of Public Works, telephone communication, 30 April 1980.

/7/ To calculate auto driver trips from total person trip ends in autos, use the following equation:

$$\frac{\text{total person trip-ends in autos}}{1.4 \text{ persons/(auto)} \times (2 \text{ trip-ends)/trip}} = \text{auto driver trips}$$

The occupancy rate of 1.4 is from the Downtown Traffic and Parking Study (San Francisco Department of Public Works, 1970).

/8/ In the judgment of the TJKM traffic engineers (in the light of uncertainties, the quality of the available data, and the type of trip-generation model used), the overall accuracy of the travel demand projections is in the range of $\pm 10\text{-}15\%$. Therefore, a change of less than 10% is statistically insignificant.

/9/ The SamTrans service to downtown San Francisco was initiated in July of 1977 and as such does not lend itself to any type of refined growth projections. The mainline routes to downtown San Francisco were grouped by SamTrans with a block of routes for projection purposes; hence, the overall projections for the group of routes do not exactly reflect the ridership changes on a single route.

● G. AIR QUALITY

● PROJECT AIR QUALITY IMPACT

Two types of air quality impacts would result from the proposed project: short-term construction impacts, including particulate and hydrocarbon emissions, and long-term vehicle-related impacts, including carbon monoxide (CO) emissions.

Demolition, earthmoving and construction activities would affect local air quality, especially particulate (dust) concentrations, for approximately 1.5 years. In contrast to gaseous pollutants and to small-size particulate from combustion, a large fraction of particulate from construction settles out of the atmosphere rapidly with increasing distance from the source and generally does not penetrate to the lungs. It has been estimated that the small-size (less than 30 microns in diameter) fraction of construction particulate, which may remain suspended indefinitely and is a health hazard, is generated at the rate of 1.2 tons per acre per month of activity./1/ This would include emissions from excavation and earthmoving, traffic on unpaved surfaces, wind erosion and construction of structures. Without mitigation, this rate could

result in a worst-case 24-hour concentration of approximately 5,500 micrograms per cubic meter at and adjacent to the site during the excavation and earthmoving phases. This would be 55 times the State 24-hour standard of 100 micrograms per cubic meter.

The use of oil-based paints would generate hydrocarbon emissions, typically 500-700 grams per liter of paint used. Hydrocarbon emissions are important because they react with nitrogen oxides in the presence of sunlight to form ozone (smog). Regulation 8, Rule 3 of the BAAQMD prohibits the sale and application of: architectural coatings after 2 September 1979 that contain more than 250 grams per liter of volatile organic compounds (VOC), except that interior coatings shall contain not more than 350 grams; and any architectural coating after 2 September 1980 that contains more than 250 grams per liter of VOC./2/

After occupancy of the completed project, automobiles would be used for about 36% of the person-trips generated by the facility. All of the affected streets would experience a traffic increase of less than 8% (see IV.F., p. 77, for traffic volumes used in this air quality analysis). Roadside CO concentrations would be increased in the immediate vicinity of the site by the computed addition of 300 vehicles per day to Beale St. This is the largest percentage traffic increase due to the project. Current (1978) CO concentrations on Beale St. between Market and Mission Sts. are estimated to be approximately 22.6 parts per million (ppm) and 10.3 ppm during the peak hour and peak 8 hours, respectively./3/ In 1981 CO concentrations on Beale St. would be approximately 18.3 ppm and 8.5 ppm during the peak-hour and peak 8-hours respectively, without the project; and 18.8 ppm and 8.6 ppm respectively, with the project. The Federal CO standards are 35 ppm for 1 hour and 9 ppm for 8 hours.

Clay St. between Front and Davis Sts. did have in 1978, and is expected to have in 1981, the highest traffic volumes and would have the highest CO levels in the area. Concentrations in 1978 are estimated at 36.3 ppm and 13.2 ppm during the peak-hour and peak 8-hours, respectively. In 1981, they would be approximately 25.2 ppm and 10.8 ppm, respectively, without the project, or 72% and 120% of the Federal 1-hour and 8-hour standards, respectively. With

project-generated traffic, these concentrations would be 25.6 ppm and 10.8 ppm, respectively, or 73% and 120% of the standard. Thus, although the project would not of itself cause violations of the standards, it would increase concentrations./3/

The building would also generate pollutants from the combustion of natural gas for heating and hot water. Table 20 compares project-generated traffic and building operation emissions to total emissions in the 9-county Bay Area.

● TABLE 20: 1981 DAILY PROJECT-GENERATED EMISSIONS (TONS/DAY)

	Vehicular Fuel Combustion*	Natural Gas Combustion**	Total Project Emissions	Estimated Regional Emissions***	
				1985	2000
Carbon Monoxide	0.518	negligible+	0.518	3,367	3,241
Hydrocarbons	0.045	negligible+	0.045	797	1,058
Nitrogen Oxides	0.059	0.001	0.060	692	721
Sulfur Oxides	0.005	negligible+	0.005	435	414
Particulates	0.008	negligible+	0.008	192	225

*BAAQMD, 1979, EMFAC-5, Vehicular Emission Factors.

**This category includes emissions from heating and hot water and other building operations. U.S. EPA, 1977, Compilation of Air Pollutant Emission Factors, AP-42 Third Edition, p. 1.4-1 - 1.4-3. Research Triangle Park, N.C.

***Association of Bay Area Governments (ABAG), BAAQMD, MTC, 1979 Bay Area Air Quality Plan, pp. 62-64. The region is the 9-County Bay Area Air Quality Management District.

+"Negligible" denotes emissions less than 0.001 tons per day.

SOURCE: Environmental Science Associates

● CUMULATIVE AIR QUALITY IMPACT

The cumulative effect of recently proposed major construction on CO in the Downtown area (see Appendix F, p. 161, for discussion of buildings analyzed) was estimated./3/ The results of the analysis are shown in Table 21. Clay St. would experience continued violations of the 8-hour standard, and Beale St. would experience new violations of the 8-hour standard.

TABLE 21: CUMULATIVE ROADSIDE CARBON MONOXIDE CONCENTRATION IMPACTS - PARTS PER MILLION (PPM)/3/

<u>Streets</u>	<u>1978</u>	<u>1981 Base Case</u>	<u>1981 Plus Other Buildings</u>	<u>1981 Plus Other Buildings and Daon Building</u>
Beale (between Market and Mission)				
Peak 1-hour (Standard = 35 ppm)	22.6	18.5	27.1	27.5
Peak 8-hour (Standard = 9 ppm)	<u>10.3</u>	8.4	<u>9.2</u>	<u>9.2</u>
Clay (between Front & Davis)				
Peak 1-hour (Standard = 35 ppm)	<u>36.3</u>	25.1	29.5	29.9
Peak 8-hour (Standard = 9 ppm)	<u>13.2</u>	<u>10.7</u>	<u>11.0</u>	<u>11.1</u>

NOTE: Underlined values exceed the applicable standard.

SOURCE: Environmental Science Associates

The CO concentrations in 1981 on Beale and Clay Sts., including the project and other major construction, would be 18% and 31% lower respectively than in 1978 during the more-restrictive 8-hour averaging time. These reductions would be due to emission controls on vehicles mandated by the state and federal governments, assuming the mandated controls do not change.

In summary, cumulative Downtown development would add to local and regional accumulations of CO, hydrocarbons and nitrogen oxides (the latter 2 being precursors of ozone), particulates, and sulfur oxides during adverse meteorological conditions such as inversions. The recently adopted regional Air Quality Plan/4/ found that ozone would continue to be a regional problem in the future, and that substantial reductions in hydrocarbon emissions would be necessary to attain and maintain the ozone standard in the Bay Area. CO

and particulates are also problems on a local scale. Because the development would increase emissions of hydrocarbons, CO, and particulates, attainment of the standards would be impeded.

NOTES - Air Quality

/1/ U.S. Environmental Protection Agency (U.S. EPA), 1975, Compilation of Air Pollutant Emission Factors, Supplement #5, p. 11.2.4-1.

/2/ Bay Area Air Quality Management District, Regulation 9, Rule for Architectural Coatings, adopted 1 March 1978.

/3/ CO calculations were made for the worst-case poor-dispersion meteorological conditions according to the BAAQMD Guidelines for Air Quality Impact Analysis of Projects, 1975, updated for 1979 emission factor revisions. Background concentrations were assumed, on the basis of the average of the second-highest concentrations recorded over the past 3 years, to be 15.7 ppm (1-hour) and 9.1 ppm (8-hour) in 1978, and 13.2 ppm (1-hour) and 7.6 ppm (8-hour) in 1981.

/4/ Association of Bay Area Governments, BAAQMD, and Metropolitan Transportation Commission, January 1979, 1979 Bay Area Air Quality Plan, San Francisco Bay Area Environmental Management Plan.

H. NOISE

The potential noise impacts associated with this project are of 3 types: 1) impact of the existing noise environment on the proposed use of the site; 2) impact of noise generated by the use of the site on adjacent development; 3) impact of construction noise on adjacent development. A complete discussion of fundamental acoustical concepts is available for public review at the Department of City Planning, Office of Environmental Review, 45 Hyde St., Room 319.

COMPATIBILITY WITH EXISTING NOISE LEVELS

The City of San Francisco has adopted guidelines for determining the compatibility of various land uses with different noise environments (Environmental Protection Element of the San Francisco Comprehensive Plan, adopted by City Planning Commission Resolution No. 7244, 19 September 1974, p. 19). For office use the guidelines require no special noise control

measures in an exterior noise environment of up to an L_{dn} of 70 dBA. The existing exterior L_{dn} levels at the site are estimated to be 64 to 78 dBA. For these levels, the guidelines require an analysis of noise reduction requirements and inclusion of noise insulation features in the building design. As the building would be climate-controlled, the expected interior L_{dn} noise levels would be approximately 44 to 58 dBA, 20 dBA below the outside noise level. Noise generated by machinery and office activities within the building would not increase these levels. Noise from individual trucks and buses passing the site would exceed the interior L_{dn} by up to 14 dBA. Generally, noise levels above 60 dBA would interfere with normal speech.

NOISE IMPACTS ASSOCIATED WITH THE PROPOSED USE

After the structure is built and occupied, local noise levels could change in 2 ways: noise due to increased traffic generated by the project and mechanical equipment noise.

The amount of traffic generated by operation of the project during any hour of the day would cause traffic noise levels to increase by less than 1 dBA. A 1-dBA increase in environmental noise is undetectable by the untrained human ear. No noise impact associated with increased traffic would therefore be expected.

The mechanical equipment to be used in the structure has not yet been chosen. Historically, mechanical equipment in buildings has increased environmental noise levels in downtown San Francisco./1/ Mechanical equipment noise is regulated by the San Francisco Noise Ordinance, Section 2909, "Fixed Source Noise Levels"(San Francisco Municipal Code, Part II, Chapter VIII, Section 1, Article 29, 1972). The project site and surrounding area are zoned C-3-0. In the C-3-0 zone, the ordinance limits equipment noise levels to 70 dBA between 7 a.m. and 10 p.m. and 60 dBA between the hours of 10 p.m. and 7 a.m. at the receiver's property line. During lulls in the traffic, mechanical equipment generating 70 dBA would dominate the site noise environment. If equipment noise were to be limited to 60 dBA to meet the nighttime limit, it would be inaudible.

CONSTRUCTION NOISE IMPACT

Construction of the Daon Building would include about 8 weeks of foundation piledriving with an impact-type (hammer) piledriver. Conventional unmuffled and unshielded piledrivers emit noise levels of 100 to 110 dBA at a distance of 100 ft. each time the driver strikes the pile. The quietest piledriver measured by the City emits 92 dBA at 100 ft., but is not always compatible with structural engineering requirements of the building. Assuming noise emissions of 100 dBA at 100 ft. piledriving would be audible to people on the streets within 1,000 ft. of the project site, where not shielded by intervening buildings. This would include the open-air restaurant on the northeast corner of Battery and Sacramento Sts. Open windows are sometimes required for ventilation in the buildings across Battery St. from the project site. Noise levels in these buildings would reach 80 to 85 dBA. Noise levels this high would require that the office workers either shut the windows or shout to communicate and would be expected to distract workers to a degree that would degrade their performance. Vibrations from piledriving would also cause discomfort. In those buildings with fixed windows facing the project site across Sacramento St. piledriver noise levels would be 60 to 65 dBA. This level would interfere with normal speech at distances beyond 3 ft. and would be annoying and distracting.

The San Francisco Noise Ordinance (Section 2907c) limits noise emissions from impact tools and equipment to 80 dBA at a distance of 100 ft. unless the Director of Public Works has approved intake and exhaust mufflers and shields or shrouds which accomplish maximum noise attenuation. To date, no muffled and/or shielded piledriver has been approved for use in San Francisco. Thus, use of any impact-type piledriver would be in violation of the Ordinance. However, the Department of Public Works allows piledriver operation under certain conditions, which may include specification of a relatively quiet piledriver to be used, predrilling of pile holes, and specification of hours of operation to reduce the number of people exposed./1/

The Noise Ordinance (Section 2907b) also limits noise emissions from any powered construction equipment to 80 dBA at a distance of 100 ft. Adherence

to this limit would ensure that this type of equipment would cause noise levels at the nearest building to be no greater than present maximum noise levels due to traffic and other mechanical equipment.

Trucking of construction materials to and from the site would not cause a noticeable increase in noise levels along haul routes, because of existing traffic noise levels on the streets.

NOTE - Noise

/1/ C. Brady, Senior Mechanical Engineer, Department of Public Works, telephone communication, 18 December 1979.

I. ENERGY

Pacific Gas and Electric Company (PG&E) would provide natural gas and electricity to the proposed project through its existing distribution systems. Traffic disruption resulting from utility connections would be limited to Battery and Sacramento Sts. on the perimeter of the site./1/

The project would require an unknown amount of energy for demolition of the existing structures, excavation, and the removal of the excavated materials and rubble to a disposal site. During construction, it is estimated that about 31,000 gallons of vehicle fuel would be used, about 2.4 billion British Thermal Units (BTU) - at source./2/ Energy would be necessary to fabricate the materials used in the structure and to transport workers to and from the site.

The structure would be designed to meet or exceed the minimum State energy efficiency standards./3/ Heating would be supplied by a natural-gas-fired boiler; the hot water would be pumped to reheat boxes in the ventilation system. The ventilation system would be a variable-volume, multi-zone, duct system which would have an economizer cycle that would take in outside air in excess of the minimum requirement when the outside air was of a desirable temperature; this would reduce air-conditioning. The air-conditioning system would be a central centrifugal chiller coupled with a cooling tower.

The operation of the structure would require about 4.7 million kilowatt hours of electric energy per year (48 billion BTU-at source), used primarily for ventilation and cooling. This would be the same amount of electricity as is used by 1,400 average residential customers in San Francisco./4/ The structure would have a connected kilowatt load of approximately 3,500 KW and would have an average monthly consumption of about 0.4 million kilowatt-hours, or about 1.3 kilowatt-hours per sq. ft. per month. For comparison, new high-rise structures at 333, 444 and 595 Market St. in San Francisco have projected electric consumption rates of 1.4, 1.8 and 2.5 kilowatt hours per sq. ft. per month, respectively. Daily and annual electric demand curves are shown in Figure 26. Peak consumption would occur on September afternoons.

This would not coincide with Pacific Gas and Electric Company's (PG&E) system-wide (northern California service area) peak demand period in August.

The project would require about 3.1 million cu. ft. of natural gas per year (3.5 billion BTU-at source) used primarily for space heating. This would be about the same amount of natural gas as is used annually by 30 average residential customers in San Francisco. This would be an average of about 0.26 million cu. ft. of natural gas per month, or about 45 BTU per sq. ft. per day. For comparison, the new high-rise structures proposed at 333, 444 and 595 Market St. have projected natural gas use rates of 137, 120 and 300 BTU's of natural gas per sq. ft. per day, respectively. Daily and annual natural gas demand curves are shown in Figure 27. Peak consumption of 350,000 BTU's per hour would occur at 8 a.m. on weekday mornings in January. The peak demand for natural gas would not coincide with the PG&E system-wide peak demand which occurs in the early evening hours in January.

It is estimated that vehicle fuel use for traffic generated by the project would be about 190,000 gallons of gasoline per year (about 47 billion BTU-at source). This use is estimated based upon the mix of vehicles expected in 1985; actual vehicle fuel use is expected to decline until 1995 as the vehicle fleet becomes more efficient.

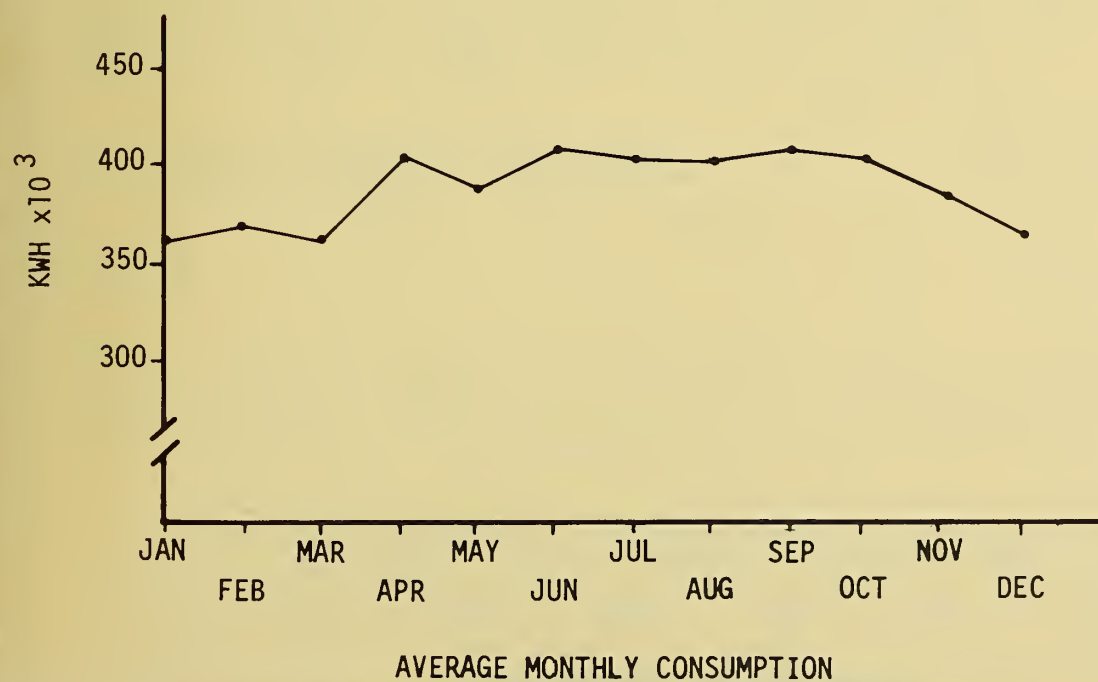
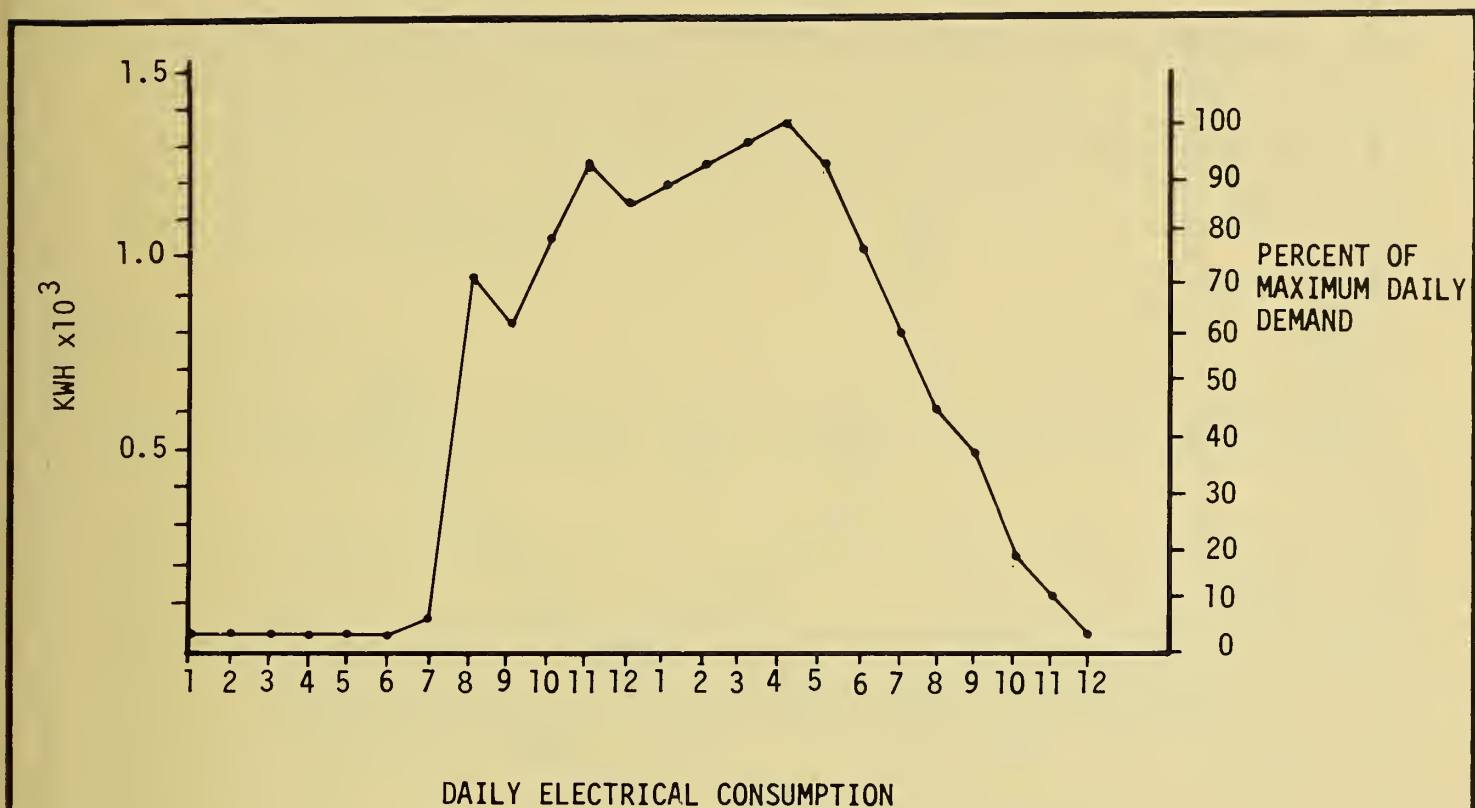


FIGURE 26: ELECTRIC POWER CONSUMPTION PROFILES

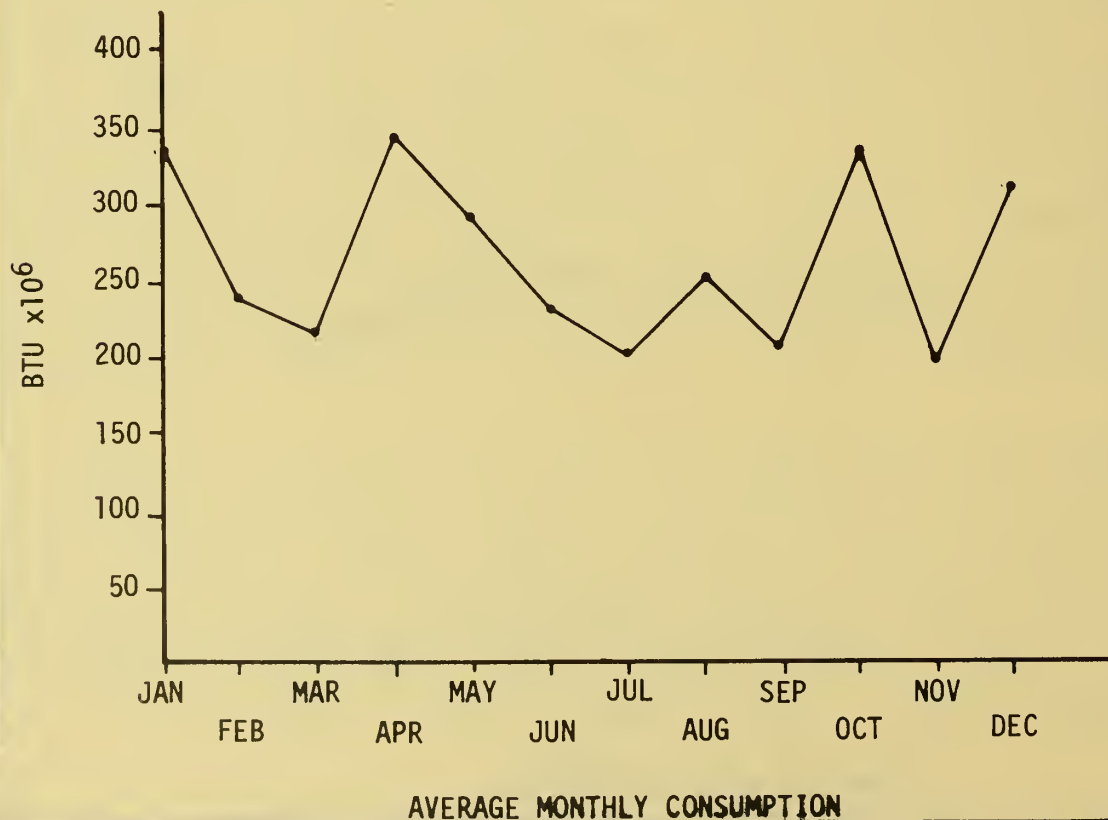
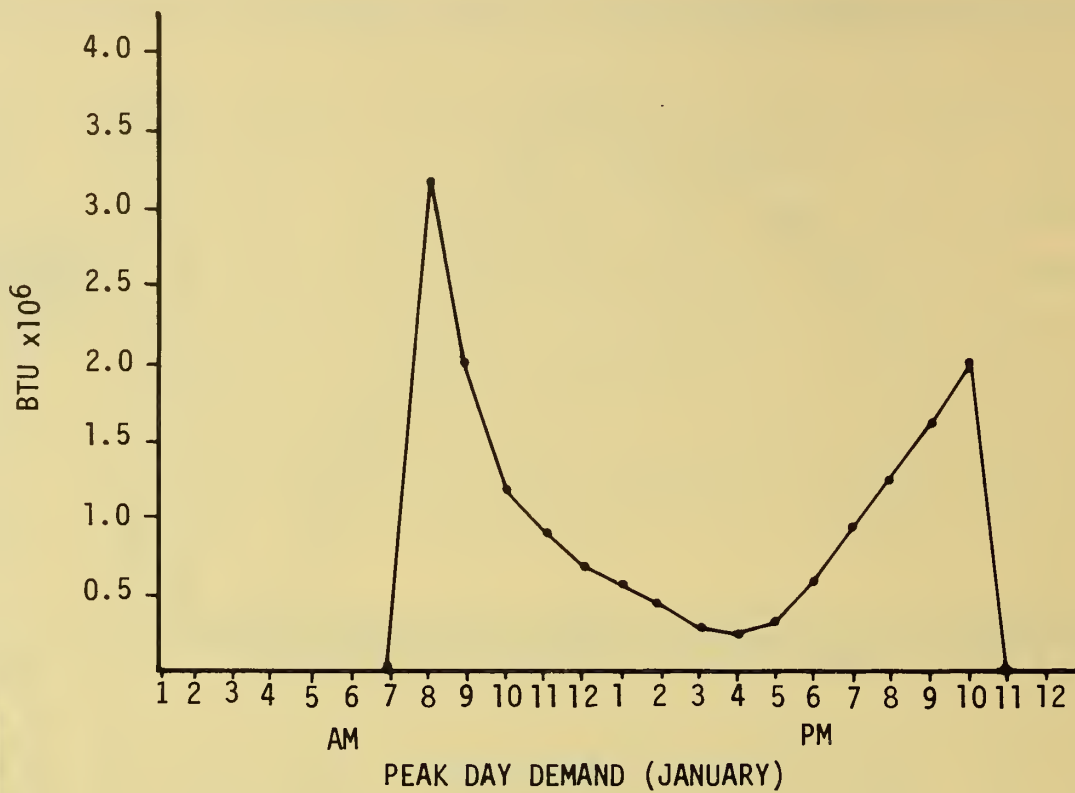


FIGURE 27: NATURAL GAS
CONSUMPTION
PROFILES

- Cumulative downtown development, including the proposed project, would use approximately 254.4 million kilowatt hours of electricity per year and approximately 1.2 billion BTUs of natural gas per day (buildings considered in the cumulative analysis include all those listed in Appendix H, p. 167, for which data were available).

NOTES - Energy

/1/ K. Austin, Commercial Representative, Pacific Gas and Electric Company, letter communication, 1 May 1979. This letter is available at the Department of City Planning, Office of Environmental Review.

/2/ BTU, British thermal unit, is a unit for measuring energy. Technically, it is the quantity of heat required to raise the temperature of 1 pound of water 1 degree F at sea level. The term 'at source' means that adjustments have been made in the calculation of the BTU energy equivalent to account for losses in energy which occur during generation and transmission of the various forms of energy as specified in: ERCDC, 1977, Energy Conservation Design Manual for New Nonresidential Buildings, Energy Resources Conservation and Development Commission, Sacramento, CA; and Apostolos, J.A., W.R. Shoemaker, and E.C. Shirley, 1978, Energy and Transportation, Sacramento, CA (Project 20-7, Task 8).

/3/ State energy efficiency standards are described in ERCNC, 1977, Conservation Regulations Establishing Energy Conservation Standards for New Nonresidential Buildings (Sections 1451-1542 of Title 20 and Section T20-1451 through T20-1542 of Title 24 of the California Administrative Code).

/4/ This estimate is based on energy consumption data in ERCDC, 1976, Quarterly Fuel and Energy Summary, Vol. 2, Nos. 1 and 2.

J. GEOLOGY, SEISMICITY AND HYDROLOGY

GEOLOGY

The site would be excavated to an average depth of 15 ft.; a basement 10 ft. deep now exists. Approximately 6,800 cubic yards of material would be removed and transported to a undetermined private disposal site on the Peninsula.

A possible hazard from lateral movement of geologic materials, particularly the Bay mud, could occur during excavation of the site. A lateral movement could occur because of the exposure of a free face in the pit wall. Such lateral movement could happen at any time, but the hazard would be greatest if

the soil were saturated with groundwater or if an earthquake were to occur. This hazard is unlikely owing to the existing basement walls and the shallow (5 ft. below the basement) depth of excavation.

The foundation of the building would be designed to carry the load into firm bearing materials below the Bay mud. The sandy materials which would bear the load are relatively incompressible, so that only minor settlement is expected to occur. This factor would be taken into consideration in the foundation design (J. Meyers, Structural Engineer, Skidmore, Owings & Merrill, telephone communication, 21 May 1979).

The removal of spoils from the site could cause the spillage of silt and sand in the streets along the haul routes. A large spill would be a safety hazard for operators of vehicles, particularly motorcyclists and bicyclists. The street dirt would be a source of siltation in the storm drains and a source of dust.

SEISMICITY

Ground shaking (Blume, 1974) during a major earthquake might damage the proposed building, but probably would not cause its collapse. The building would be designed to meet the standards of the San Francisco Building Code and the more stringent standards of the seismic design code of the Structural Engineers Association of California (SEAOC). The SEAOC design standards relate the structural design to the maximum probable earthquake on the nearest fault and on a more distant fault, and to the maximum probable earthquake in the region (an 8.3 Richter magnitude event on the San Andreas Fault). The design approach would be to minimize damage and loss of life from an earthquake.

The structure would have a foundation of concrete piles and tie-beams. The building would have a welded steel moment frame with the steel columns and beams welded together. The moment frame design would be constructed to resist both wind and earthquake. According to J. Meyers, Structural Engineer at Skidmore, Owings and Merrill, the exterior would reduce the chances of glass

falling from the facade by being enclosed in a lightweight curtain-wall (telephone communication, 19 March 1979).

Ground shaking during an earthquake could cause loose interior panel walls to be thrown out, and unattached objects, such as bookcases, to topple. Fires could be ignited within the building. If liquefaction and lateral landsliding were to occur in the vicinity, local streets might buckle or crack due to lateral landsliding, accompanying liquefaction, or rapid settlement. Water mains and pipes and underground utility lines might break, leaving the building without outside water, power or telephone communication. Elevators could be made inoperable due to loss of power or damage to the elevator system. Emergency water storage and a power generator would be incorporated into the building as required by City code.

HYDROLOGY

Dewatering would be conducted at the site for an estimated 26 weeks. The water would be discharged into the storm drain system. The dewatering might produce some local subsidence in compressible geological materials such as artificial fill and soft Bay mud. Settlement of these materials might damage older brick and masonry buildings in the immediate vicinity of the site. The walls of such structures might crack or lean out of plumb and floors might be bent or tilted out of horizontal. Streets and sidewalks could develop swales, cracks or "potholes", thereby creating a potential traffic hazard.

Underground utility lines, e.g. sewers, water mains, power and telephone lines, might be bent or broken by the settlement or lateral shifting of soil caused by dewatering. Because of the potentially high costs of repairs associated with such damages, the Department of Public Works generally requires that a Surety Bond be posted before issuance of permission for excavation. The construction contractor would be held responsible for any damage which might result from dewatering.

The lowering of the water table during construction is not expected to have a permanent impact on the ground water levels. Draw-down of the water table would occur within several hundred feet of the site and would decrease rapidly

with distance. Bay mud is relatively impermeable and the sea wall restricts the intrusion of saltwater into the geologic materials of the land.

Seepage might be a problem in the basement of the building. A sub-drainage system would be constructed below the basement to relieve water pressure.

K. GROWTH INDUCEMENT

- The project would add about 275,000 gross sq. ft. of office space (235,000 net. sq. ft.) and 12,000 gross sq. ft. of retail space (8,300 net. sq. ft.) to the Downtown supply, while about 43,000 gross sq. ft. of commercial space in the present buildings on Block 237 would be demolished. Space vacated by San Francisco firms moving into the project would become available for other office tenants.
- It is not known to what extent employees at the Daon building would be newcomers to San Francisco, either as residents or commuters, rather than persons already residing in the City but not currently employed, or employed outside of or elsewhere in the Downtown area./1/ To the extent that the project attracts new residents or commuters who would not otherwise have been attracted to San Francisco or the Bay Area, it may be viewed as employment-generating and growth-inducing, resulting in a variety of indirect growth effects. These effects would include additional demand for housing in San Francisco and the region, now in short supply. Other indirect growth effects resulting from new residents attributable to the proposed project include additional demands for a variety of commercial, social, medical, and municipal services, and secondary demands on streets, freeways and transit systems. This increased demand would have a general tendency to increase City residential rents and sales prices somewhat, but in the context of uncertain future construction activity, inflation and other sources of housing demand, its influence on future housing costs cannot be stated conclusively.

- According to "Changes in the San Francisco Housing Inventory" (San Francisco Department of City Planning, 1977), the City's housing stock is increasing by 1,000 to 1,500 units per year. Assuming that one of each three new jobs at the Daon building would result in the formation of a new household and that about 42 % of these new households would want to live in San Francisco, new employment at the project site would create additional (indirect) demand for about 170 housing units. These units would represent one-tenth to one-fifth of a year's supply of housing starts in San Francisco.

The 1979 Downtown San Francisco Conservation and Development Planning Program Phase 1 Study states that:

"Continued employment growth in Downtown is likely to result in continued displacement of lower income residents and a higher rate of new housing construction. The total number of units made available by these means, however, will not be sufficient to house the increased number of Downtown employees. Therefore, the percentage of employees living in San Francisco will continue to decline."/2/

- Employees who would not live in San Francisco would be expected to contribute to the demand for housing elsewhere in the region, so that the impact on housing outside of the City would be further intensified. The areas outside of the City which would be likely to provide housing would be Contra Costa County; Marin County, particularly Novato; and southern Alameda County, particularly Fremont./3/

The project would continue the trend toward replacement of older buildings in the Financial District with new construction, but would probably not itself stimulate further office development near the site, as such development has already taken place or is being planned.

The project would require no new construction or extension of public service or utility systems and would occur in an already developed Downtown urban setting. It would therefore not require any infrastructural improvements that would open or intensify development opportunities that do not already exist.

Cumulatively, the project could contribute incrementally to an oversupply of downtown office space in the 1980's. Such an oversupply could have the effect of inhibiting growth in the Yerba Buena Center Redevelopment Area or other areas of the City, particularly south of Market St. An oversupply in San Francisco, should it occur, would not appreciably inhibit office development elsewhere in the Bay Area (see IV. E, p. 71).

NOTES - Growth Inducement

/1/ Net or marginal new office employment directly resulting from a particular project is difficult to determine. A theoretical assumption must be made as to whether the new employment would have occurred without the particular project. In Section IV.E. of this report, economic effects have been analyzed as gross impacts; that is, the future with the project is compared directly to the present without the project. Net impacts, in the sense of comparing the probable future without the proposed project to a future with the project, are not discussed.

/2/ Sedway/Cooke, October 1979, Downtown San Francisco Conservation and Development Planning Program Phase I Study, p. 48.

● /3/ D. Morehead, Regional Relocation Director, Coldwell Banker, telephone communication, 25 July 1979.

V. MITIGATION MEASURES PROPOSED TO MINIMIZE THE POTENTIAL IMPACTS
OF THE PROJECT

In the processes of project planning, design and coordination, a number of measures have been identified that would reduce or eliminate the potential adverse environmental effects of the proposed project. Most of these measures have been adopted by the project sponsors or are under consideration by their architects, builders, or other contractors. A few measures have been rejected. Each of these measures, and its status with respect to the proposed project, is discussed below. Where a measure has been rejected, the reasons for its rejection are also shown (see Table 22).

TABLE 22: MITIGATION MEASURES PROPOSED TO MINIMIZE THE ADVERSE EFFECTS OF THE PROJECT

MEASURES TO BE INCLUDED IN PROJECT	MEASURES RECOMMENDED AND/OR UNDER CONSIDERATION	MEASURES REJECTED (AND REASONS FOR REJECTION)
URBAN DESIGN AND VISUAL IMPACTS		
- Walking distances would be shortened through the open pedestrian way between Battery and Sacramento Sts. and the project would provide retail frontages along the pedestrian way at street level to encourage pedestrian activity, interest and movement (see Figure 7).		
- To provide pedestrian interest by encouraging retail and restaurant uses, the project sponsor would not lease ground floor space to a financial institution or discount merchandiser.		
- The design of signs and graphics would be controlled by the City Planning Commission to avoid a garish or distracting appearance.		
- The project would include planters on each setback level which would be planted with small evergreens. This would enhance the visual quality of the setbacks from street level viewpoints along Battery and Sacramento Sts. and from surrounding buildings overlooking the site.		

CULTURAL AND HISTORIC IMPACTS

- Should evidence of cultural or historic artifacts of significance be found during project excavation, the Environmental Review Officer and the President of the Landmarks Preservation Advisory Board would be notified. The project sponsor would select an archaeologist and/or maritime historian to help the Office of Environmental Review determine the significance of the find and whether feasible measures, including appropriate security measures, could be implemented to preserve or recover such artifacts. The Environmental Review Officer would then recommend specific mitigation measures, if necessary, and recommendations would be sent to the State Office of Historic Preservation. Excavation or construction which might damage the discovered cultural resources would be suspended for a maximum of 4 weeks to permit inspection, recommendation and retrieval.

TABLE 22: MITIGATION MEASURES PROPOSED TO MINIMIZE THE ADVERSE EFFECTS OF THE PROJECT (Continued)

MEASURES TO BE INCLUDED IN PROJECT	MEASURES RECOMMENDED AND/OR UNDER CONSIDERATION	MEASURES REJECTED (AND REASONS FOR REJECTION)
WIND IMPACTS	- Street trees and small structures such as kiosks for vendors could be placed along the Sacramento St. and Battery St. sidewalks to reduce windspeeds near the proposed building and provide shelter for pedestrians.	
SECURITY	- A 24-hour security guard would be stationed in the lobby; there would be another security guard on duty at night.	
- Closed-Circuit TV would be used to survey the loading docks.		
- The project sponsor would meet with the Crime Prevention Bureau of the Police Department to discuss further security measures.		
FIRE	- The project design would incorporate fire protection measures required by the San Francisco Building Code. These would include a fire alarm system and an alarm monitoring station which would be equipped to indicate the time and location of a fire, to switch on emergency power sources, and control the elevators. Other requirements would be an automatic fire detection system, a voice communications system, ventilation for smoke control, a standby power generator, an on-site water supply, and a sprinkler system.	
- The project sponsor would meet with the Fire Marshal to discuss the building design and proposed internal fire protection measures.		

TABLE 22: MITIGATION MEASURES PROPOSED TO MINIMIZE THE ADVERSE EFFECTS OF THE PROJECT (Continued)

MEASURES TO BE INCLUDED IN PROJECT	MEASURES RECOMMENDED AND/OR UNDER CONSIDERATION	MEASURES REJECTED (AND REASONS FOR REJECTION)
WATER - Low-flow plumbing fixtures would be used to conserve water.		
SOLID WASTE - Space would be provided for storage of recyclable materials.		
TRANSPORTATION, CIRCULATION AND PARKING - Pacific Gas and Electric Company would coordinate work schedules with other utilities requiring trenching so that street disruption would take place during weekends and off-peak hours. - No on-site parking would be provided, in accordance with the revised Transportation Element of the Comprehensive Plan. - Bicycle storage would be provided, both for use by couriers and to encourage use of this alternate form of transportation by employees and visitors. - San Francisco Federal Savings and Loan Association would establish a carpooling system for its employees. - The Daon Building management office staff would coordinate a carpooling system for the employees of firms in the building. Carpool matching (and carpool vehicles) are available under the auspices of Rides for Bay Area commuters, a non-profit organization.		

TABLE 22: MITIGATION MEASURES PROPOSED TO MINIMIZE THE ADVERSE EFFECTS OF THE PROJECT (Continued)

MEASURES TO BE INCLUDED IN PROJECT	MEASURES RECOMMENDED AND/OR UNDER CONSIDERATION	MEASURES REJECTED (AND REASONS FOR REJECTION)
- In recognition of the need for public transit services to meet peak demand generated by cumulative office building development in the Downtown district, the project sponsor would participate in a Downtown Assessment District, with annual or monthly assessments, or similar nondiscriminatory mechanism, to provide funds for mass transit, should such a mechanism be established by the City.	- During the demolition and excavation period, haul trucks and delivery vehicles could enter and exit the site between the hours of 9 a.m. and 4 p.m. only, so as to avoid conflicts with peak-hour traffic. The project sponsor intends to meet with the Traffic Engineering Division of the Bureau of Engineering (DPW), the Office of Environmental Review and the Muni to determine necessary and feasible construction traffic mitigation measures which would be satisfactory to all parties.	
	- The projected Level of Service at the intersection of Beale and Mission Sts. would be reduced to F under cumulative development conditions, exclusive of the proposed project. This could be mitigated by restriping of the Beale St. approach to the intersection. At the present time, Beale St. is striped for 3 lanes southbound. There is a bus stop on the west side and curbside parking on the east side. Sufficient width is available to restripe the approach to 5 lanes if towaway restrictions were placed on the curbside parking during peak hours. The resulting lane pattern could be 1 left-and-freeway lane, 2 freeway-only lanes, 1 through lane and 1 through-and-right lane. The Level of Service would change from F to D (volume to capacity ratio (v/c) change from 1.10 to 0.86) for the suggested pattern. Such a measure would be entirely under the jurisdiction of the Bureau of Traffic Engineering (DPW) and would be considered a possible solution at such time as the projected conditions develop.	

TABLE 22: MITIGATION MEASURES PROPOSED TO MINIMIZE THE ADVERSE EFFECTS OF THE PROJECT (Continued)

MEASURES TO BE INCLUDED IN PROJECT	MEASURES RECOMMENDED AND/OR UNDER CONSIDERATION	MEASURES REJECTED (AND REASONS FOR REJECTION)
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- The critical approach to the intersection of Mission and Main Sts. is the freeway off-ramp which currently has 2 lanes northbound onto Main St. The volume of traffic projected to use these lanes in the 1981, including cumulative development but exclusive of the project, would decrease the Level of Service to F; this projected volume exceeds the carrying capacity of the approach as it is currently constructed. To increase the capacity of the off-ramp, more green time could be allocated to the appropriate phase of the traffic signal by prohibiting left-turns from eastbound Mission St. onto Main St. This measure would change the Level of Service from F to E (v/c ratio change of 1.09 to 0.97). Such a measure would be entirely under the jurisdiction of the Bureau of Traffic Engineering (DPW) and would be considered a possible solution at such time as the projected conditions develop. Further reduction in the v/c ratio would not be possible without lane additions to the off-ramp which would be under the jurisdiction of CalTrans.

- Mitigation of the projected Level of Service E operation during peak hours due to cumulative development but exclusive of the project, at the intersection of Washington and Battery Sts. would be possible through restriping of the southbound approach. The approach currently is striped to carry 3 lanes of traffic (2 through, and 1 right-and-through). Use of a peak-hour towaway lane to allow 4 lanes of traffic; (3 through, and 1 right-and-through), would cause a change in Level of Service from E to D (v/c ratio change from 0.91 to 0.83). Such a measure would be entirely under the jurisdiction of the Bureau of Traffic Engineering (DPW) and would be treated as a possible solution at such time as the projected conditions develop.

TABLE 22: MITIGATION MEASURES PROPOSED TO MINIMIZE THE ADVERSE EFFECTS OF THE PROJECT (Continued)

MEASURES TO BE INCLUDED IN PROJECT	MEASURES RECOMMENDED AND/OR UNDER CONSIDERATION	MEASURES REJECTED (AND REASONS FOR REJECTION)
AIR QUALITY IMPACTS	- During the demolition and construction period, unpaved surfaces would be wetted at least twice a day with reclaimed water to hold down dust; this would reduce particulate emissions about 50%. - Water-based or latex paints would be used on all interior drywalls painted by the general contractor or project sponsor, rather than oil-based paints which emit hydrocarbons while drying; this would reduce hydrocarbons from drying paint by about 60%.	- The overload that would occur on the SamTrans mainline (Bayshore Highway Route) due to cumulative development could be alleviated by additional buses, possibly by shifts in routes, and headway changes. (The San Mateo Transit District is the agency controlling the assignment of additional buses; it is controlled by funds available through its taxing and revenue system. The Metropolitan Transportation Commission is the regional administrator of Federal Urban Mass Transit funds and California funds.)
NOISE IMPACTS	- The project sponsor intends to meet with the Bureau of Engineering and the Office of Environmental Review to determine necessary and feasible mitigation measures for piledriving noise which would be satisfactory to all parties. - Holes for the piles would be predrilled to reduce noise impacts; then the piles would be driven the rest of the distance required. - To minimize construction noise, only muffled gasoline and diesel-powered construction equipment or electrically powered construction equipment would be used.	- Piledriving activity could be limited to hours resulting in the least disturbance to neighboring uses (e.g. 4:30 p.m. to 11 p.m.). This would require a night-work permit from the Director of Public Works.

TABLE 22: MITIGATION MEASURES PROPOSED TO MINIMIZE THE ADVERSE EFFECTS OF THE PROJECT (Continued)

MEASURES TO BE INCLUDED IN PROJECT	MEASURES RECOMMENDED AND/OR UNDER CONSIDERATION	MEASURES REJECTED (AND REASONS FOR REJECTION)
- The mechanical equipment in the building would be muffled to comply with the City Noise Ordinance, Section 2909. - Additional noise insulation would be incorporated into the exterior walls of the building, as called for in the Environmental Protection Element of the Comprehensive Plan (p. 19).		
ENERGY IMPACTS		
- The building management would make storage containers available to tenants for collection and storage of recyclable solid wastes such as glass, metal, paper, computer cards and newspapers.		
GEOLOGY AND HYDROLOGY IMPACTS		
- Excavation pit walls would be shored up and protected from slumping or lateral movement of soils into the pit. Shoring and sheeting with soldier beams could be used for this purpose. The contractor would comply with the Excavation Standards of the California Occupational Safety and Health Agency (Department of Industrial Relations).		- The loads of haul trucks carrying excavated materials from the site could be covered with a tarp to reduce dust and potential spillage onto the streets. This measure was rejected because it is not required by Code nor is it customary in San Francisco. The project sponsor has agreed to a provision of the general contract which would prohibit the overloading of trucks; this would help to reduce spillage.
- Battery and Halleck Sts. adjacent to the site would be swept by the demolition and excavation contractors as required by Code so that silt would not be washed into the storm drains and dust would be reduced. This would be a provision of excavation and demolition contracts.		
- Groundwater observation wells would be installed for monitoring the level of the water table and other instruments to monitor potential settlement and subsidence. The City would require a lateral and settlement survey to monitor any movement or settlement of surrounding buildings and adjacent streets during the dewatering. Control lines and benchmarks would be established for monitoring horizontal and vertical movement. Costs for the survey and any necessary repairs to services under the streets would be borne by the contractor.		

TABLE 22: MITIGATION MEASURES PROPOSED TO MINIMIZE THE ADVERSE EFFECTS OF THE PROJECT (Continued)

MEASURES TO BE INCLUDED IN PROJECT	MEASURES RECOMMENDED AND/OR UNDER CONSIDERATION	MEASURES REJECTED (AND REASONS FOR REJECTION)
- If, in the judgment of City engineers, unacceptable subsidence occurs during the construction, groundwater recharge would be begun by the general contractor to halt the settlement. This might cause a delay in construction. - Groundwater pumped from the site would be retained in a holding tank to allow suspended particles to settle, if this is found necessary by the Industrial Waste Division of the Department of Public Works, to prevent sediment from entering the storm drain/sewer lines.		
SEISMICITY IMPACTS		
- The project sponsor would build the project in compliance with the recommendations of the structural engineers and in accordance with the standards of the Structural Engineers Association of California.		
- As required by the San Francisco Building Code, nonstructural elements of the building, such as hanging light fixtures, hung ceiling and wall partitions, and mechanical equipment would be attached firmly in such a manner as to reduce the likelihood of their falling during an earthquake.		
- An emergency water supply and pumps would be provided as required by the San Francisco Building Code so that the sprinkler system would be more likely to be operable after an earthquake. This emergency measure would mitigate the potential hazard created by fires occurring at a time when the water supply may be cut off by earthquake damage to water mains.		

VI. SIGNIFICANT ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED IF THE PROPOSED PROJECT IS IMPLEMENTED

URBAN DESIGN

The project would require demolition of 3 buildings. The buildings at 280 Battery St. and 353 Sacramento St. are included in the 1976 Architectural Inventory and rated "B" in the 1979 survey of Downtown buildings done by the Foundation for San Francisco's Architectural Heritage.

The scale of the tower would contrast with smaller-scale buildings to the east. Shadows from the tower would extend over the podium level of Two Embarcadero Center in the early afternoon during the spring and fall.

Wind speeds under northwesterly conditions would increase at the northeast corner of Halleck and Battery Sts. and near the intersection of California and Battery Sts. Westerly wind speeds would increase on Halleck and Sacramento Sts.

ECONOMICS

Eleven businesses employing about 220 persons would be displaced from the site.

TRANSPORTATION

- Construction hauling would temporarily increase traffic on access streets and haul routes. Project-generated traffic would increase traffic volumes on the surrounding local streets. The percent increases in project-generated traffic above the 1981 projected base traffic volumes would range from about 3% on Battery St. to about 8% on Beale St. The project would generate a daily demand for about 420 parking spaces.

VI. Significant Environmental Effects

AIR QUALITY

Project-generated traffic and traffic from cumulative Downtown development would increase emissions of air pollutants; attainment of the standards would be impeded.

NOISE

Construction noise would cause intermittent work interference in neighboring office buildings.

ENERGY

During operation, the project would require about 4.7 million kilowatt hours of electrical energy, generated predominantly from nonrenewable fossil fuels, and about 3.1 million cu. ft. of natural gas annually.

CUMULATIVE DEVELOPMENT

- The project would contribute incrementally to the cumulative traffic, transit, parking, air quality and housing demand impacts of development now under construction and proposed in the Downtown business district.

VII. ALTERNATIVES TO THE PROPOSED PROJECT

Alternatives to the project as proposed are described and compared below.

A. NO PROJECT

This alternative, as defined by the California Environmental Quality Act, would entail no change to the site. The 3 existing buildings would be retained. 280 Battery St. and 353 Sacramento St. are rated "1" and "0", respectively, in the 1976 Architectural Inventory (Department of City Planning, 1976) and also rated "B" in the 1979 architectural and historic resources inventory prepared by the Foundation for San Francisco's Architectural Heritage.

Traffic, transit and air quality conditions described (IV.F. p. 74 and IV.G., p. 89) as 1981 Base conditions with cumulative development would exist on streets around the site. The noise environment of the area would not change. There would be no change in the demand from the site for community services. The 11 businesses now operating on the site would not have to relocate. Total composite property tax revenues would remain at about \$19,000 per year and property tax revenues to the City and County of San Francisco would remain at about \$16,300 per year, increasing at the 2% annual rate allowable under Proposition 13.

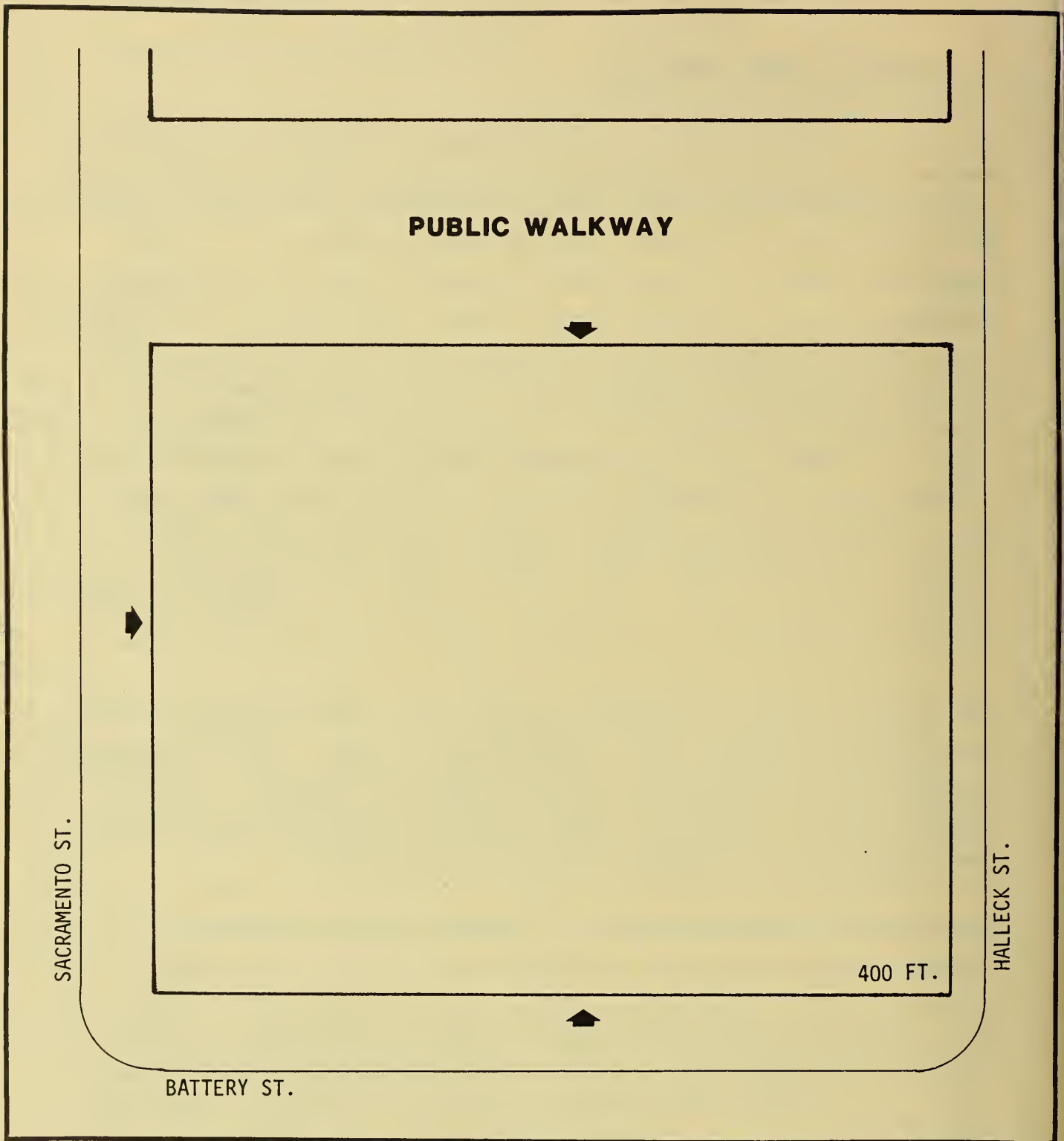
- This alternative would preserve options for future development of the site. It is not acceptable to the project sponsor because it would not provide additional office space to meet the existing demand in San Francisco.

B. RECTANGULAR TOWER ALTERNATIVE

An alternative design complying with the Height and Bulk District which would provide the maximum floor area permitted under the existing City Planning Code could be developed on the site. The 30-story, 400-ft.-tall structure (about 50 ft. taller than the project) would have about 355,000 sq. ft. of gross floor area (66,000 sq. ft. more than the proposed project), including about 308,000 gross sq. ft. of office space and about 12,000 gross sq. ft. of retail space and a main savings office on the ground floor. The building would be set back from the eastern property line and a 35-ft.-wide walkway would connect Sacramento and Halleck Sts. on the east side of the building (see Figure 28). There would be no open pedestrian way through the ground floor, nor would there be any setbacks at the corners. Development bonuses which would be applied to gain the increased floor area would include those for: multiple building entrances, wider sidewalks, plaza, side setback and shortened walking distance. (The bonus calculations are available for public review at the Department of City Planning, Office of Environmental Review.)

The facade would be of a lightweight material with tinted gray glass arranged in a horizontal pattern, similar to the proposed project. The visual interest provided by the landscaped corner setbacks would be eliminated. The bulk of the tower would be reduced when viewed from the south or north, but increased when viewed across the diagonal dimension of the structure.

Shadow effects would be similar to the proposed project; shadowing of sidewalks and the podium level of Two Embarcadero Center would be more extensive because of the increased height. As with the proposed project, wind speeds would increase near the corner of Halleck and Battery Sts., at the intersection of Battery and Sacramento Sts., and along Sacramento St. east of the building. Under northwesterly wind conditions, increases in wind speeds would be greater on Sacramento St. than with the project as proposed. The increase in westerly winds at the intersections of California and Battery Sts., Halleck and Battery Sts. and Sacramento and Battery Sts., and along Halleck St. would be greater than with the proposed project. The increase would be less along Sacramento St. east of the site than would occur with the proposed design.



LEGEND

-  BUILDING ENTRANCE
- 400 FT. HEIGHT OF BUILDING



SOURCE: ENVIRONMENTAL SCIENCE ASSOCIATES, INC.

FIGURE 28: RECTANGULAR TOWER
ALTERNATIVE - SITE PLAN

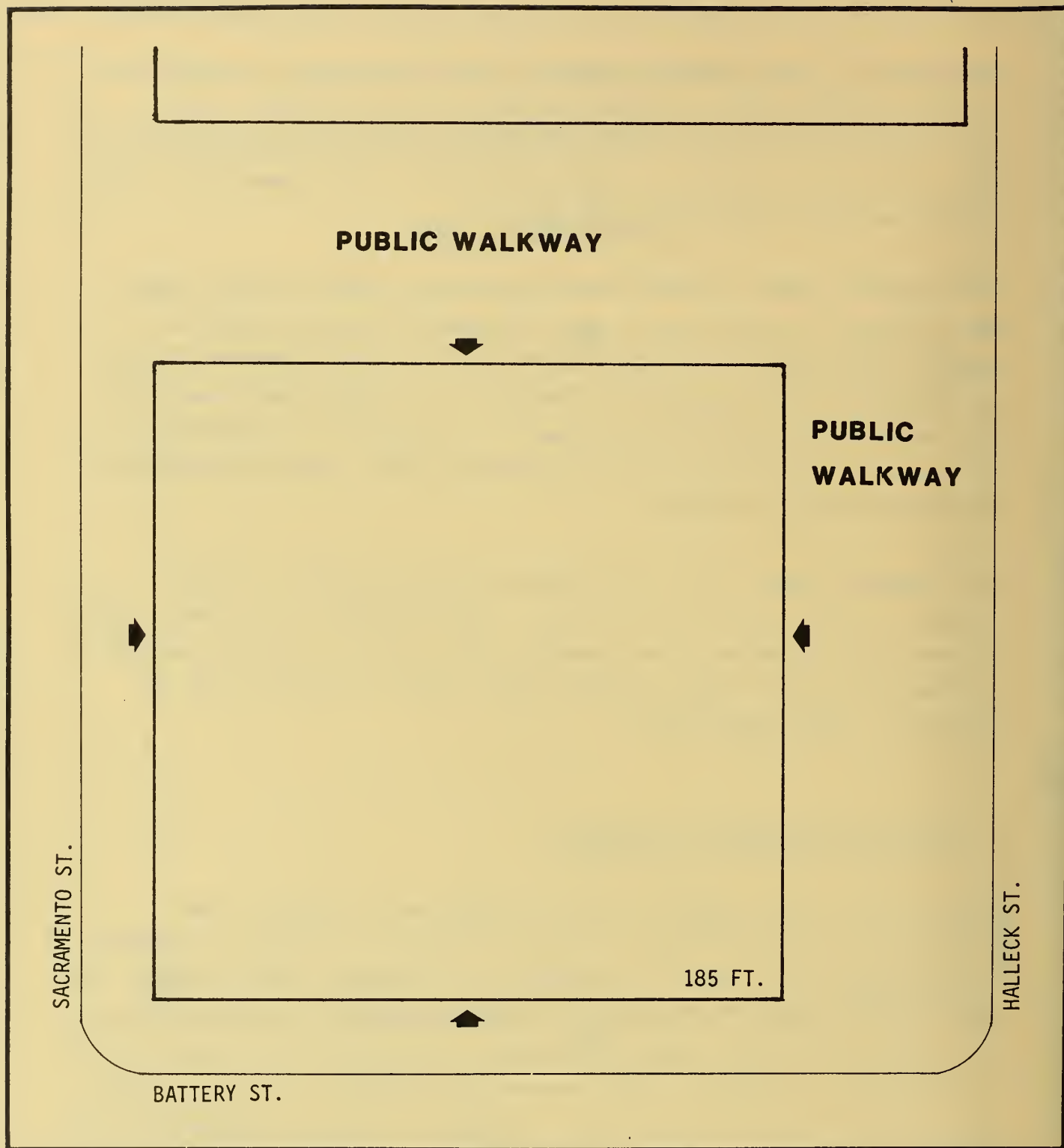
This alternative would require community services and energy in proportion to its increased floor area. As with the project, the 3 buildings which currently exist on the site would be demolished and the 11 businesses located there would have to relocate. Traffic and transit travel generated by the building would be increased by about 20%.

The rectangular tower alternative would have a fair market value of about \$32.1 million (in 1979 dollars), about 19% greater than the project as proposed; the assessed value would be about \$8.3 million. Between \$321,000 and \$406,000 in total property tax revenues would be generated annually; of this, between \$273,000 and \$345,000 would be revenues to San Francisco. The net increase to San Francisco over existing buildings on the site would be between \$257,000 and \$329,000.

This alternative would result in increased office space with increased revenues to the project sponsor. It was rejected because the project sponsor believes that the design of the proposed project with 3 landscaped setbacks is architecturally more interesting and relates better to the site than the alternative rectilinear design.

C. INITIATIVE-CONFORMING ALTERNATIVE

A building could be designed for the site which would conform to the Initiative to Limit the Height and Floor Area Ratios of Buildings in Downtown San Francisco (Proposition O was defeated in the November 1979 election). Had the Initiative passed, it would have limited the height of structures in the C-3-0 District to 260 ft. (about 20 stories) and the Basic Floor Area Ratio to 8:1, exclusive of bonuses for preservation of a designated landmark or the construction of housing on the site or nearby; with bonuses, the maximum Floor Area Ratio would be 14:1. Several possible building designs could be constructed on the site under the provisions of the Initiative. (Alternative designs are available for public review at the Department of City Planning, Office of Environmental Review.) One such design would consist of a 14-story, 185-ft. tall rectilinear tower containing 140,000 gross sq. ft., exclusive of any mechanical floors (see Figure 29). The facade of the building would be of



LEGEND

▲ BUILDING ENTRANCES
185 FT. HEIGHT OF BUILDING

SOURCE: ENVIRONMENTAL SCIENCE ASSOCIATES, INC.

FIGURE 29: INITIATIVE-CONFORMING
ALTERNATIVE WITHOUT
HOUSING - SITE PLAN

VII. Alternatives

a lightweight material and tinted glass, similar to the proposed project. The 100 ft. by 100 ft. square tower would be set back 37 ft. from the eastern property line and 27 ft. from the southern property line along Halleck St. The open areas formed by these setbacks would be landscaped with planters and used as pedestrian walkways and open space.

This alternative would contain about 130,000 gross sq. ft. of office space (about 120,000 net sq. ft.) and about 10,000 gross sq. ft. of retail space on the first floor (about 8,000 net sq. ft.). The structure would be about 165 ft. shorter and have about 1/2 the floor area of the proposed project.

- The elimination of the landscaped setbacks at the corners of the structure would result in reduced visual interest. Pedestrian interest would be provided by the landscaped open areas and could be increased by the addition of shop windows along the walkways. The walkways would be shaded by existing buildings and the proposed tower most of the day at most times of the year. Shadows on the podium level of Two Embarcadero Center would be eliminated (see Figure 25a, p. 59a).

The domestic water, sewer and solid waste disposal requirements of this alternative would be about 1/2 those of the proposed project. The alternative would generate about 45% fewer auto and transit trips, with a corresponding reduction in air pollution. As with the project, this alternative would result in the destruction of the 3 buildings on the site and would force the relocation of the 11 businesses located there.

Based on a fair market value of \$15.8 million, 32% less than the proposed project, this alternative would have an assessed value of \$4.0 million. The estimated total composite property tax revenues would be between \$158,000 and \$200,000. Property tax revenues to San Francisco would be between \$134,000 and \$170,000. This would be a net increase of \$118,000 to \$154,000 over composite property tax revenues to San Francisco from the existing buildings on the site.

The project sponsor has elected not to propose such a design because rental floor area would be reduced, and this would not be economically feasible given

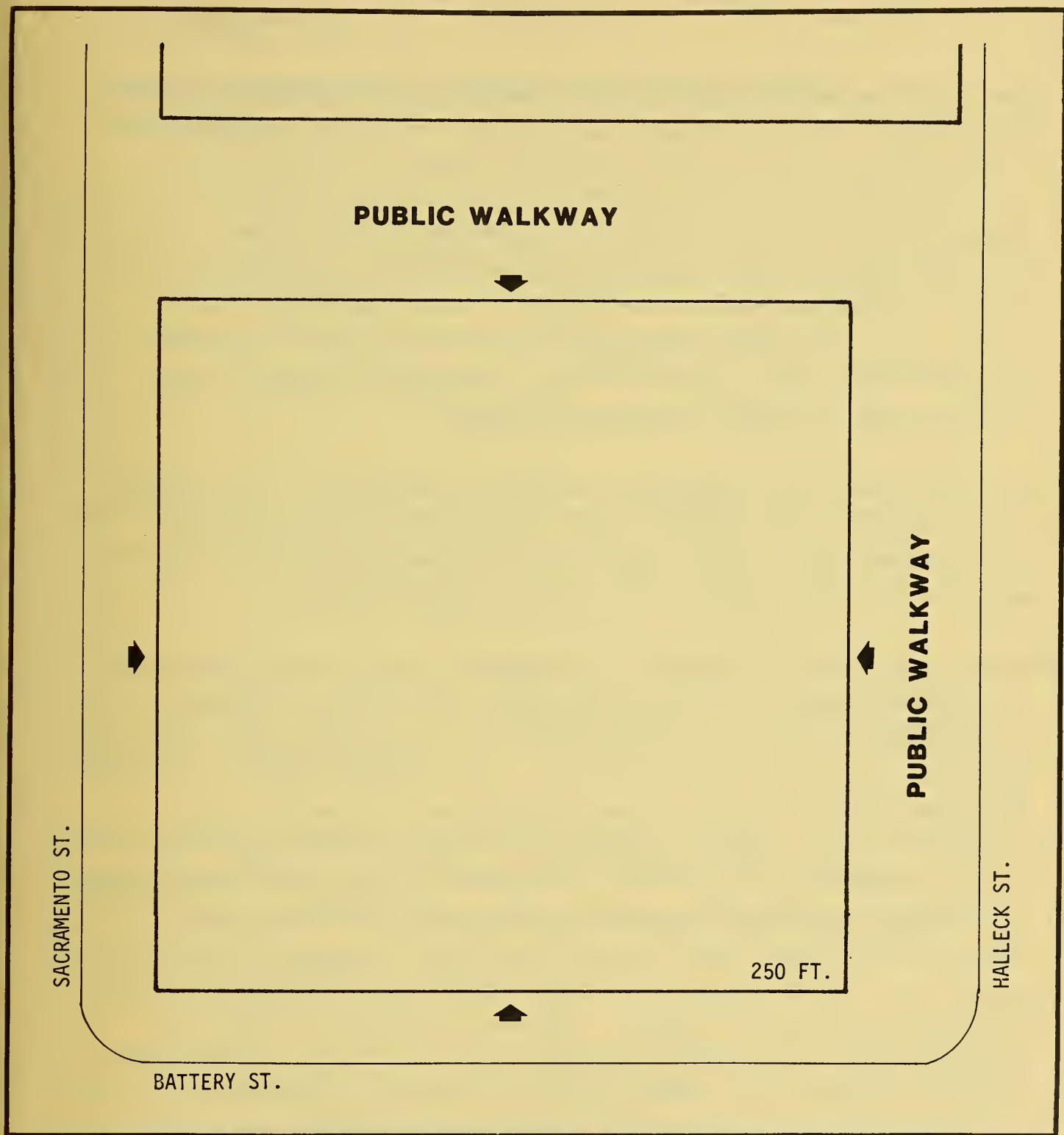
the size of the site. Elimination of the proposed pedestrian way between Battery and Sacramento Sts. is not considered desirable by the project sponsor, and the project sponsor does not consider a shorter building compatible with other major buildings in the area, such as One Embarcadero Center.

VARIANT INCORPORATING THE HOUSING BONUS

- There were 2 density bonuses available under the Height Limit Initiative (Proposition O). One bonus was for the preservation of a designated landmark and the other was for provision of housing on or near the site. Since the structures on the site have not been officially designated as landmarks and would be demolished under this alternative in any case, that bonus would not have been available to the project sponsors. Additional office space could have been constructed, however, on a 1 for 1 basis in return for provision of housing, up to an overall Floor Area Ratio of 14 to 1. The maximum floor area for the site would thus be 245,400 gross sq. ft., including housing.

One such variant design containing housing would be about 250 ft. tall (100 ft. shorter than the project) and contain 20 stories. The facade would be similar to the proposed project (see Figure 30). The approximately 110 ft. by 110 ft. rectilinear tower would be set back 27 ft. from the eastern property line and 17 ft. from the southern property line. The landscaped open areas formed by the setback of the building would be used as walkways to provide pedestrian interest.

The variant design would have about 245,000 gross sq. ft. of floor area (about 15% less than the proposed project). The first floor would contain about 12,000 gross sq. ft. (9,500 net sq. ft.) of retail and commercial space. The 2nd through 15th floors and a portion of the 16th floor would be occupied by about 180,000 gross sq. ft. (163,000 net sq. ft.) of offices. The uppermost 5 floors would contain about 53,000 gross sq. ft. of residential space. About 50 condominium units, costing about \$200,000 each, would be provided; these would probably be occupied by upper-income persons working in the Financial District and might also be leased or purchased by companies for use by out-of-town employees.



LEGEND

-  BUILDING ENTRANCES
- 250 FT. HEIGHT OF BUILDING

FIGURE 30: INITIATIVE-CONFORMING
ALTERNATIVE WITH
HOUSING - SITE PLAN

SOURCE: ENVIRONMENTAL SCIENCE ASSOCIATES, INC.

VII. Alternatives

Such a building would require increased community services and energy to serve the residents. Provision of such housing close to the major employment center of the City might reduce peak-hour travel by residents to downtown jobs.

The estimated fair market value would be about \$29.0 million, about 7% more than the proposed project, and the assessed value would be \$7.3 million. This would produce between \$289,000 and \$366,000 in total composite property taxes. Composite property tax revenues to San Francisco would be between \$246,000 and \$311,000. The net increase in property tax revenues to San Francisco would be between \$230,000 and \$295,000.

The elimination of the landscaped corner setback would result in the decreased visual interest of the building facade. Shadowing of the Two Embarcadero Center podium level would be reduced; the on-site walkways would be shaded most of the year by existing buildings or the alternative tower.

- The project sponsor has elected not to propose a design including housing for the following reasons: "At its present height of 24 stories, the proposed building would be generally surrounded by buildings of greater height, such as the Embarcadero Center, 101 California St., and the Bank of America. Unlike the Golden Gateway, long-range views of the Bay and City would be very limited. For this reason the project sponsors do not believe people would find it an attractive place to live. In addition, a mixed-use residential and office project would impose functional and economic constraints on the designer and developer; these include the provision of separate elevators for each use as a security measure, additional plumbing and wiring costs, and the provision of parking for residents. These factors combine to reduce the productive floor area within the building at the same time as they increase the cost. Therefore the building becomes less functional and more costly," (J. Markey, Senior Projects Manager, telephone communication, 14 May 1980).

D. ALTERNATIVE MAINTAINING THE FACADES OF 280 BATTERY ST. AND 353
SACRAMENTO ST.

An alternative building design for the site would preserve the facades of 353 Sacramento St. and 280 Battery St. which are rated "0" and "1", respectively, in the 1976 Architectural Inventory (Department of City Planning) and rated "B" in the 1979 Heritage architectural and historic resources inventory. 240-248 Battery St., rated "D" in the Heritage inventory, would be demolished. A high-rise office tower of approximately the same floor area as the proposed project would then be built above the 2 retained building facades. 353 Sacramento St. and 280 Battery St. are brick buildings. They do not have the structural strength to support a high-rise tower so all the support would be provided by new construction. The facades would have to be isolated from the interiors of the structures during demolition and site preparation, braced, and protected from damage from machinery. Preservation of the brick facades would be difficult, but could be accomplished. A structural concrete or steel bracing wall would be constructed behind the facades to support the usable floor area on the ground floor and succeeding higher floors (Alan Rudy, Architect, Skidmore, Owings and Merrill, telephone communication, 16 January 1980).

Retention of the 2 building facades would preserve a measure of the existing pedestrian environment. Incorporation of the 2 facades into a coherent building design would be difficult, however, because they are not of the same height nor architectural style (see Figure 11, p 18). The impacts of this alternative would otherwise be similar to the project as proposed.

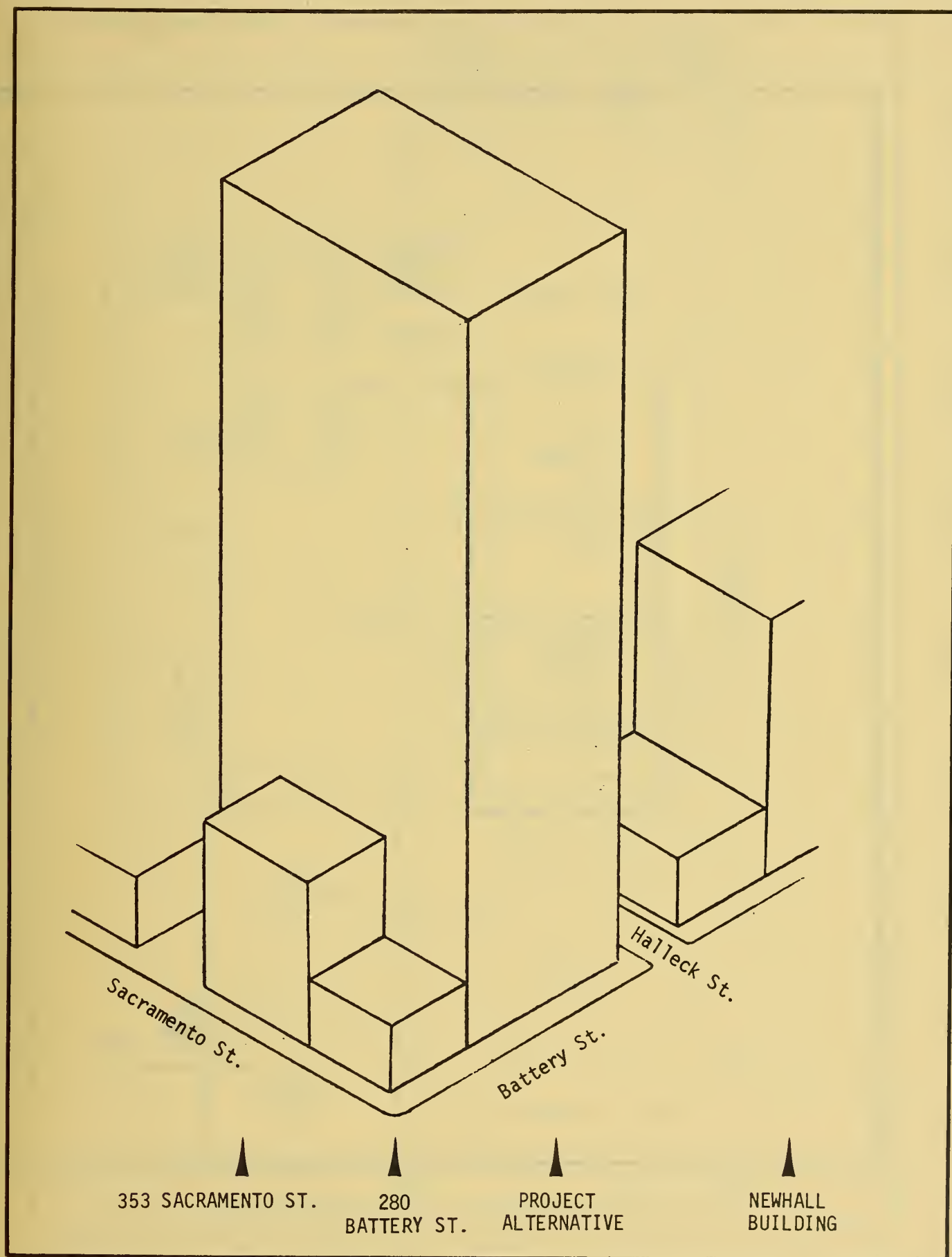
The project sponsor has rejected this alternative because of the ground floor area which would be lost in preserving the brick facades, the restrictions it would impose on architectural design, and the elimination of the pedestrian way providing a connection between Battery and Sacramento Sts.

● E. ALTERNATIVE RETAINING 280 BATTERY ST. and 353 SACRAMENTO ST.

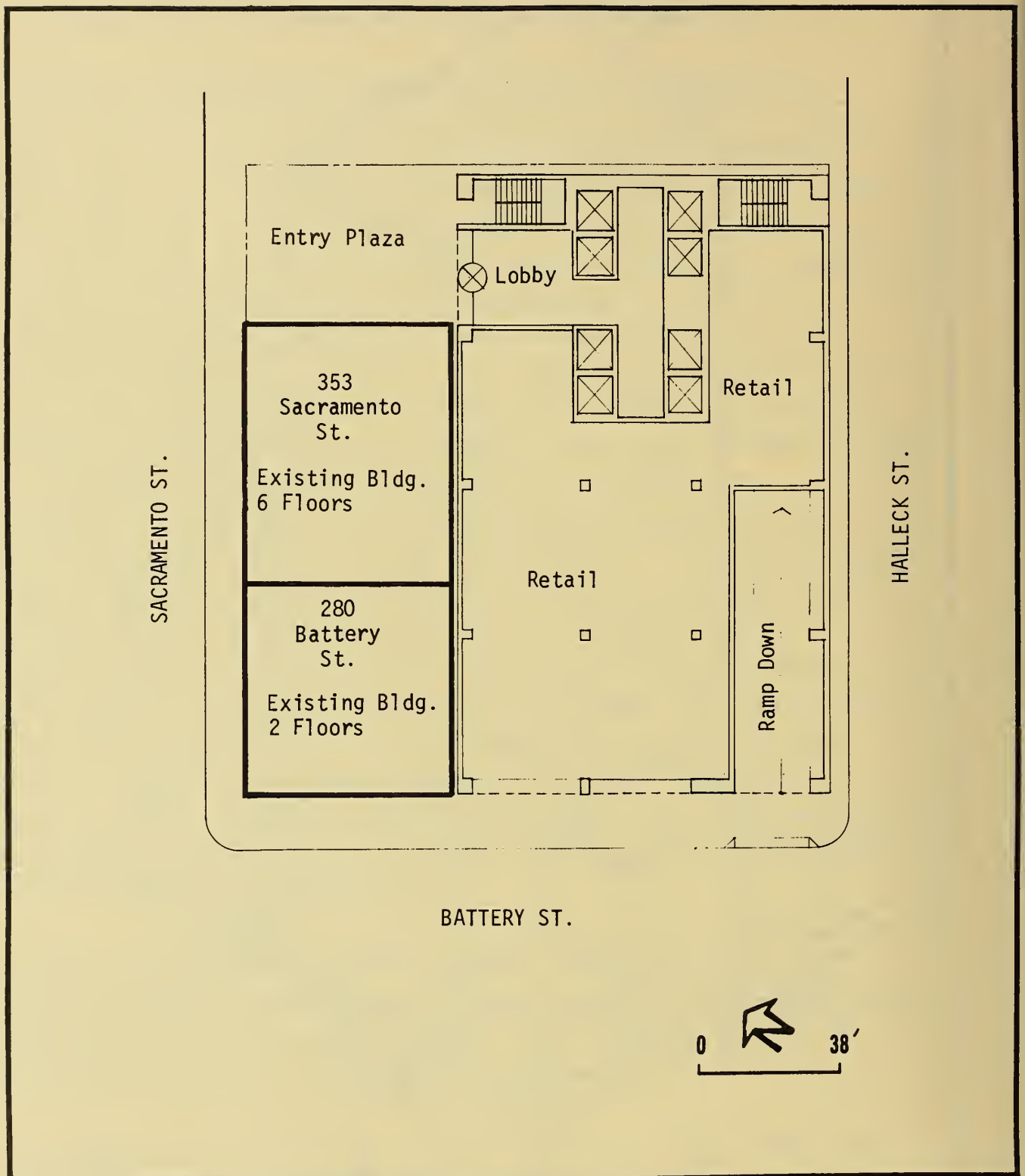
An alternative building design could be developed which would preserve entirely the existing 280 Battery St. and 353 Sacramento St. and not exceed the Basic 14 to 1 Floor Area Ratio (FAR) for the site. The alternative building would be built on Lot 14, now containing 240-280 Battery St. which would be demolished. Lots 15 and 16 would continue to be occupied by the existing buildings. The site area is approximately 17,500 sq. ft. Based on a 14 to 1 FAR, the allowable gross is about 244,900 sq. ft. Combined, 280 Battery St. and 353 Sacramento St. contain about 19,700 sq. ft. of existing gross floor area. Therefore, the allowable new gross floor area would be about 225,200 sq. ft. This alternative, retaining the 2 B-rated buildings, would accommodate the new allowable gross square footage in a tower with a rectangular base fronting on Battery St. and setback from Sacramento St. An isometric view of this alternative concept is shown in Figure 31. A typical floor in the new 275 ft.-high, 21-story structure would be about 10,940 gross sq. ft. The ground floor would be about 60% retail (6,520 sq. ft.), 30% service area (3,315 sq. ft.), and 10% lobby (1,100 sq. ft.) as shown in Figure 32, p. 127b. Lower floors in the new building would have about 9,130 sq. ft. of rentable area and 1,810 sq. ft. of service areas. Upper floors would have slightly greater rentable space (9,450 sq. ft.) and smaller service areas (1,490 sq. ft.)(see Figure 33, p. 127c). Setbacks could be provided at upper floors; this would reduce the rentable floor area. Truck docks would be on a below-ground level and would be accessed by a ramp from Battery St.

Due to the relatively small average floor size, and the desirability of minimizing internal hallways and service areas, the typical floor would be most appropriately occupied by a single tenant. The existing buildings to be retained would continue in retail and office space use.

The 3 buildings would employ about 1,030 persons and would have about 85% of the traffic, transit, parking and community services demand generated by the proposed project.

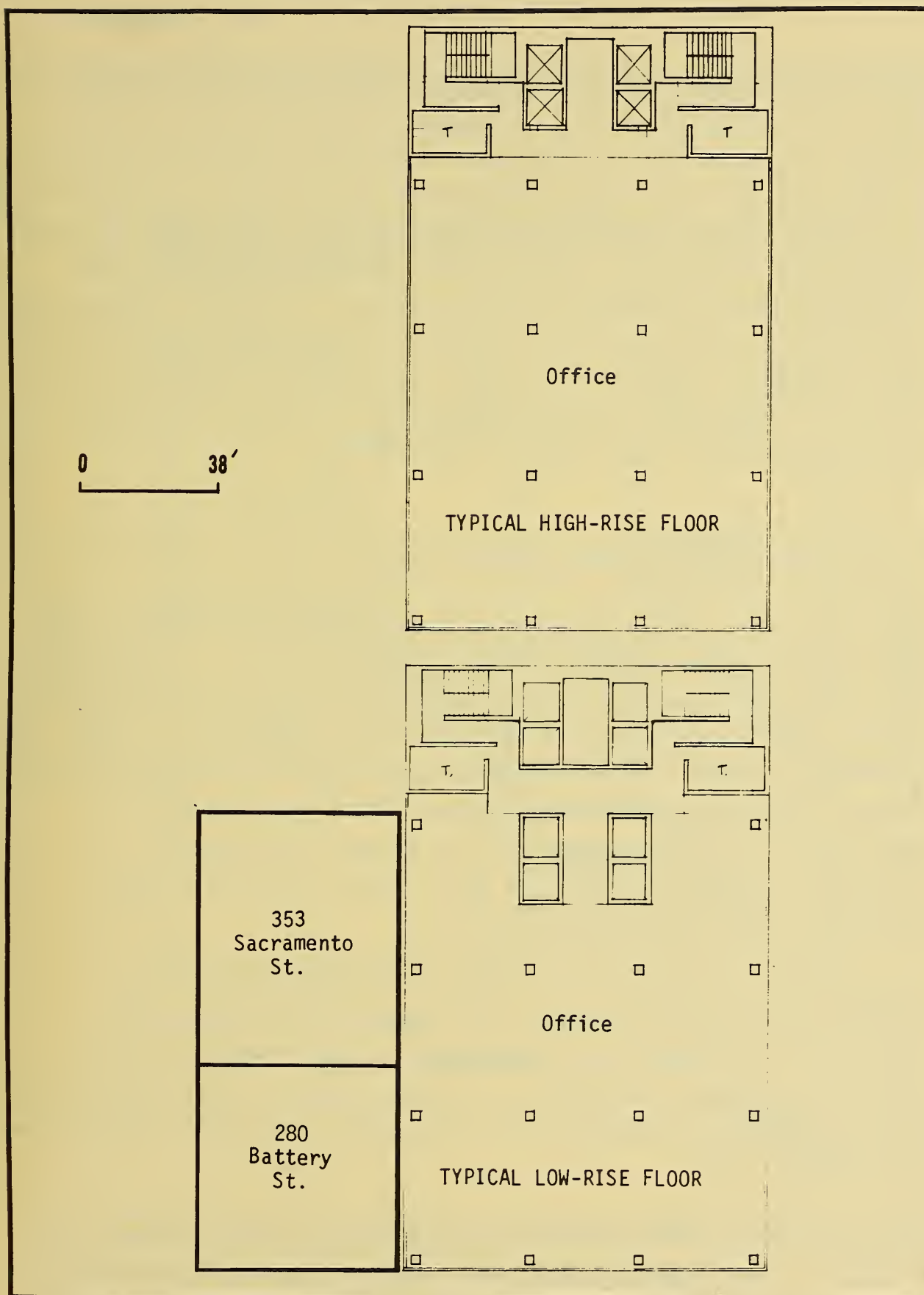


● FIGURE 31: ALTERNATIVE RETAINING 353 SACRAMENTO ST. AND 280 BATTERY ST. - ISOMETRIC VIEW



SOURCE: Skidmore, Owings & Merrill

● FIGURE 32: ALTERNATIVE RETAINING
280 BATTERY ST. AND
353 SACRAMENTO ST. -
GROUND FLOOR PLAN



SOURCE: Skidmore, Owings & Merrill ● FIGURE 33: ALTERNATIVE RETAINING 280 BATTERY ST. AND 353 SACRAMENTO ST. - TYPICAL LOW-RISE AND HIGH-RISE FLOORS

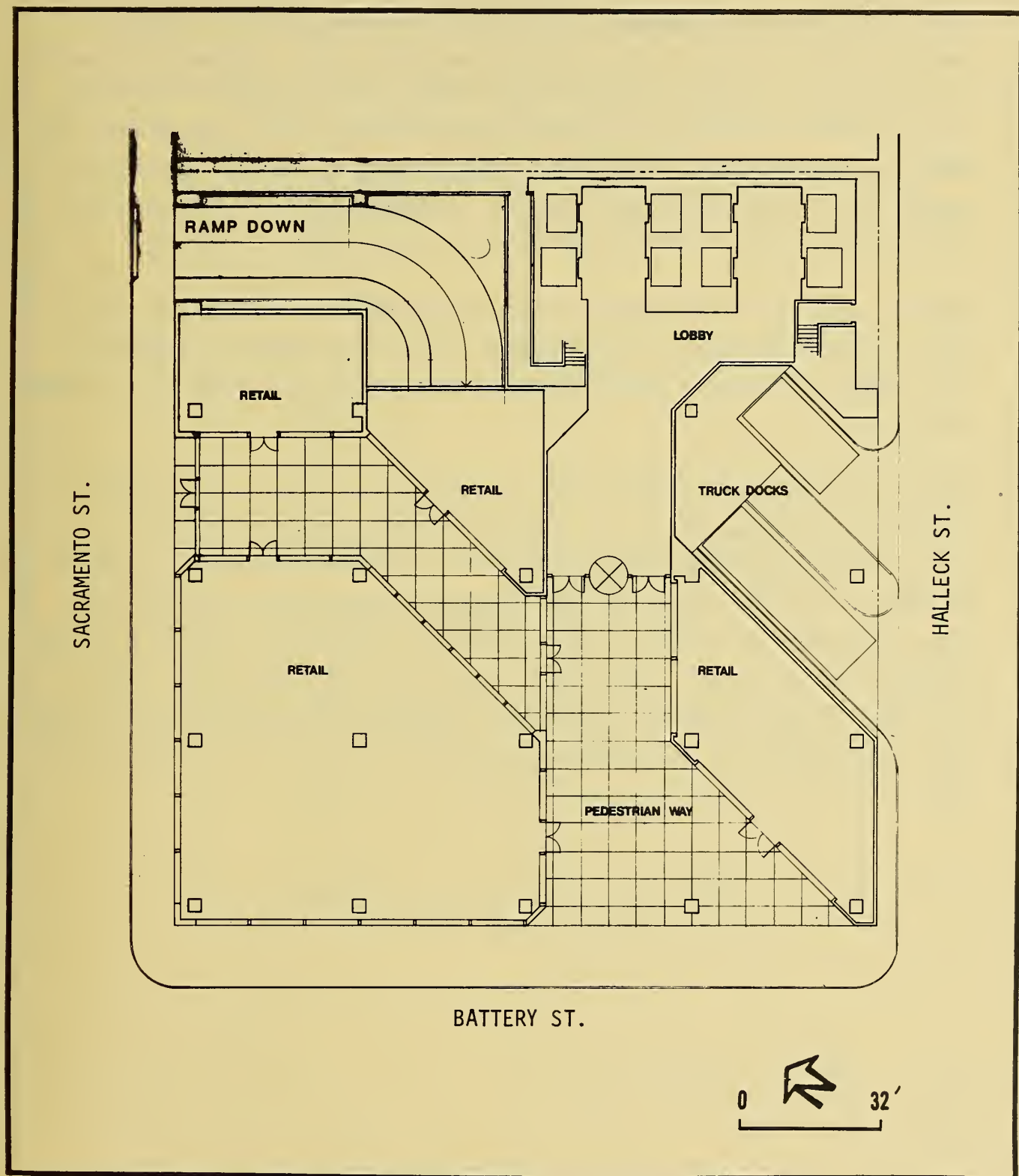
This alternative was rejected by the project sponsor because the rentable floor areas would be too small to be economic in relation to the non-usable elevator core, washrooms and staircases. The offices would not be attractive to tenants because the building frontage would be on Halleck St., rather than on more desirable Sacramento St. and almost one-half of the window area would face south across Halleck St. On the north, the building would face the existing buildings on the site for up to 6 stories. The project sponsor does not believe that the resulting building would be marketable, because the small floor areas would not be as efficient nor the building as attractive a place to work as the proposed project (J. Markey, Senior Projects Manager, Daon Corporation, personal communication, 15 May 1980).

● F. ALTERNATIVE WITH SHORT-TERM PARKING

The 7% gross floor area maximum that may be allocated for parking under the City Planning Code would amount to about 20,200 gross sq. ft. To accommodate this maximum would require 2 floors. The parking levels would be below-grade and access would be provided by a ramp mid-block on Sacramento St. beneath the Sacramento St. setback. About 64 parking spaces could be provided with valet parking. Parking access could be by means of a one-lane ramp with signalization to allow two-way movement in and out of the garage. Incorporating the ramp to the garage would require a revision of the ground-level floor plan as shown in Figure 34.

Vehicles entering the garage would interfere with pedestrians on the Sacramento St. sidewalks. As the City is planning to signalize the intersection of Sacramento and Front Streets (S. Shoaf, Bureau of Traffic Engineering, telephone communication, 5 February 1980), exiting garage traffic would be able to enter Sacramento St. during gaps in the traffic stream caused by the signal.

Short-term parking demand generated by the project has been estimated to be 22 spaces. If the proposed parking were limited to short-term parking only, there would be an excess of 42 spaces over the project's short-term parking demand.



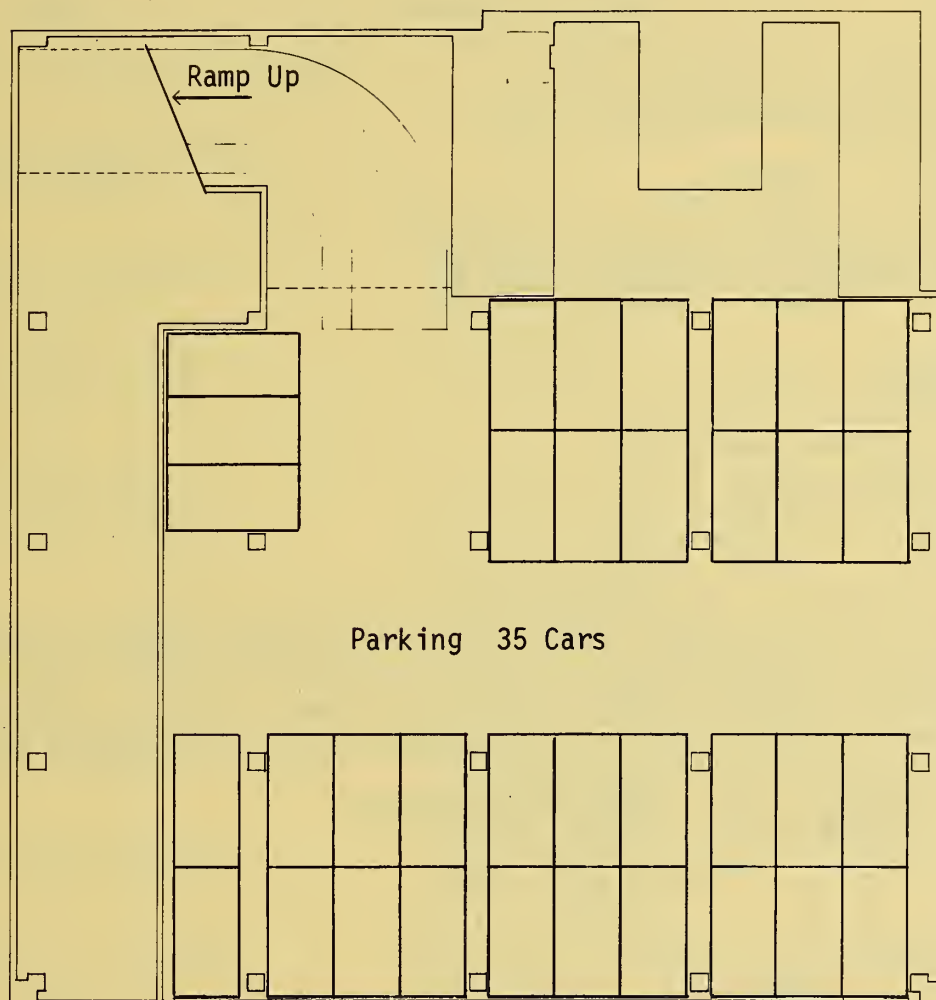
SOURCE: Skidmore, Owings & Merrill

● FIGURE 34: ALTERNATIVE WITH SHORT-TERM PARKING - GROUND FLOOR PLAN

The short-term parking demand could be met by construction of 1 level of parking with 34 spaces of valet parking (see Figure 35). The 34 spaces would be sufficient to satisfy the short-term project parking demand of 22 spaces. As the number of spaces would be decreased from the 2-level alternative, the impact on Sacramento St. traffic and pedestrians from vehicles exiting the garage would be correspondingly reduced. A modification of the ground floor plan similar to that shown in Figure 34, p. 127e, would be required.

Specific provisions for regulating parking use would be necessary to assure short-term availability. Parking spaces would not be leased on a monthly basis; fees would have a high incremental rate and ceiling price to discourage day-long use.

Objective 1, Policy 10 of the revised Downtown Transportation Plan states "Develop the Downtown Core as an automobile control area". Objective 1, Policy 3 states "Provide needed additional short-term parking facilities in peripheral locations around but not within the Downtown Core, adjacent to major thoroughfares, subject to the criteria in Objective 1, Policy 1 of the Citywide Parking Plan." The project site is in the Downtown Core. Thus, provision of any long-term or short-term parking on the project site would not be in accordance with the Objectives and Policies of the City's Comprehensive Plan.



SOURCE: Skidmore, Owings & Merrill

● FIGURE 35: ALTERNATIVE WITH ONE LEVEL OF SHORT-TERM PARKING - GARAGE FLOOR PLAN

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X. APPENDICES

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APPENDIX A: INVENTORY OF ARCHITECTURALLY SIGNIFICANT BUILDINGS

In 1974, 1975 and 1976, the San Francisco Department of City Planning conducted a parcel by parcel, citywide inventory of architecturally significant buildings. An advisory review committee of architects and architectural historians, including John Beach, Architectural Historian; Michael Corbett, Architectural Historian; John Frisbee, Regional Director, National Trust for Historic Preservation; Mrs. G. Bland Platt, President, San Francisco Landmarks Preservation Advisory Board; James Ream, Architect; Judy Waldborn, Architectural Historian; Francis Whisler, Architect; Sally Woodbridge, Architectural Historian; William Coburn, Architect; Robert Hersey, Architect; and Al Lanier, Architect; assisted in the final determination of evaluative ratings for the 10,000 buildings which have been entered in an unpublished 60-volume record of the inventory. The buildings have been recorded on color-coded maps which identify locations and relative significance; these are available for public inspection at the Department of City Planning.

The inventory was not an inventory of historic structures. Rather, it was an inventory of buildings that were considered to be architecturally significant from the standpoint of overall design, or particular design features. Contemporary buildings were included as well as some more than 50 years old. Each building was numerically rated as to its overall architectural significance. The ratings ranged from a low of "0" to a high of "5". The buildings were also separately classified by style. Finally, each structure received a summary rating based on the first 2 codes as well as on its environmental and urban design setting, which also ranged from "0" to "5". Thus each building included in the inventory was coded by its architectural significance, its style, and its overall environmental significance. Buildings receiving a summary rating of "3" or higher are considered to be structures of merit.

Inclusion of a building in the inventory does not necessarily require or encourage its preservation. Rather, the urban design purpose is to guide the design of new construction which would affect the setting or visual environment of such buildings so as to minimize the harmful or incompatible effects.

APPENDIX B: ARCHITECTURAL AND HISTORICAL SURVEY BY THE FOUNDATION FOR
SAN FRANCISCO'S ARCHITECTURAL HERITAGE

The Foundation for San Francisco's Architectural Heritage, through its consultants Charles Hall Page & Associates, has completed and published a recent architectural and historical survey of all downtown buildings (Splendid Survivors, San Francisco Architectural Heritage, 1979). Most buildings surveyed were scored according to four categories or criteria: Architectural Significance; Historical-Cultural Significance; Environmental Significance and Negative Alterations. Summary ratings from A to D were then assigned to each building built before 1945 on the basis of these scores.

The ratings are defined as follows:

- A A particularly fine, early, rare, or environmentally irreplaceable type of resource. San Francisco's best. Eligible for the National Register of Historic Places, State Inventory, and probably City Landmark status. Particularly strong individual landmark importance.
- B An important landmark of National Register Quality. A very good or conspicuous resource type or of significant environmental influence. Eligible for the State Inventory and possibly City Landmark status.
- C Resources which have some merit and strength of identity. These may be considered background buildings. They are important elements of the urban fabric which support the character and setting of more significant resources. Eligible for the National Register or State Inventory when included in historic districts.
- D Buildings of no particular cultural or design merit, with little historical significance.

APPENDIX C: MICROCLIMATE STUDY

I. INTRODUCTION

Architects, engineers and city planners designing urban structures are limited by the lack of information on wind effects brought on by the presence of structures, such as discomfort for pedestrians and wind-caused mechanical problems with doors, windows and ventilating systems. Once a structure is built, remedial measures (if they exist at all) are usually very expensive.

It is difficult to anticipate, by analysis or intuition, the winds that will be caused by a structure, since they are determined by very complex interactions of forces. Fortunately, it is possible to predict the wind patterns and pressures around structures by testing scale models in a wind tunnel that can simulate natural winds near the ground. This allows the designer to foresee possible environmental and mechanical problems and alleviate them before the building is erected.

Data from wind tunnel tests can be combined with climatological data to analyze the effects of a proposed structure on pedestrians in terms of human comfort. The frequency distribution of wind strengths at pedestrian level, combined with temperature data and shadow patterns of the proposed structure and its surroundings, can be used to forecast comfort at pedestrian levels.

II. SUMMARY

A wind tunnel investigation was conducted on models of the site as it now exists, and as it would exist with the proposed project and 1 alternative. The project and alternative designs varied in shape, site coverage and height.

The proposed building of 350 feet with setbacks at different heights was found to increase northwesterly winds from moderately high to high near the Halleck-Battery and California-Battery intersections. Wind would decrease along Halleck St. and near the Front-Sacramento Sts. intersection. The building caused an increase of westerly winds from low to moderate levels at the Sacramento-Battery intersection and the north side of the Halleck-Battery intersection. Westerly winds also would be accelerated along Halleck and Sacramento Sts.

A 395-foot conventional rectangular building was found to have a similar, but greater, effect on winds for both wind directions tested. One exception was west winds along Sacramento St. east of the site, where this alternative increased winds less than the proposed project.

III. BUILDING AND SITE DESCRIPTION

The proposed project site is in downtown San Francisco, at the southeast corner of Sacramento and Battery Sts., north of Halleck St. The site currently is occupied by 3 buildings, ranging from 2 to 6 stories. The area surrounding the site is comprised of a mixture of older and newer highrise office buildings. The One Embarcadero Center highrise complex is located directly across Sacramento St. from the site.

The proposed project is 127 ft. wide by 137 ft. deep, with a height of 350 ft. The building would have 3 setbacks. A rectangular setback would be placed at about 30 ft. on the second floor along Sacramento St. The sixth floor would have a triangular setback of about 80 ft. at the corner of Battery and Sacramento Sts. between the entranceways, and the 14th floor (about 185 ft.) would have a triangular setback at the corner of Halleck and Battery Sts (see Figure C-2).

For this report, Alternative I would be a rectangular building 125 ft. wide by 102 ft. deep, with a height of 395 ft. This alternative would have not setbacks from surrounding streets. The building would not cover the entire site, but would have a 35-ft. wide open space between structures, running from Sacramento St. to Halleck St. (see Figure C-3).

IV. MODEL AND WIND TUNNEL FACILITIES

Model

Scale models of the proposed building phases and alternatives and nearby structures were constructed of polystyrene and urethane foams. A model of the structures surrounding the area for a distance of several blocks was constructed of the same materials.

The scale used was 1 inch equals 30 ft. The model of the surrounding city area was built to this scale with building configurations and heights obtained from the Sanborn maps at the San Francisco Department of City Planning.

Wind Tunnel Facilities

The Environmental Impact Planning Corporation boundary layer wind tunnel was designed specifically for testing architectural models. The working section is 7 ft. wide, 43 ft. long, and 5 ft. high. Wind velocities in the tunnel can be varied from 3.5 mph to 13 mph. The flow characteristics around sharp-edged objects such as architectural models are constant over the entire speed range. Low speeds are used for photographing tracer smoke, high speeds for windspeed measurements.

Simulation of the characteristics of the natural wind is facilitated by an arrangement of turbulence generators and roughness upwind of the test section. These allow adjustments in wind characteristics to provide for different scale models and varying terrain upwind of the project site.

Measurements of windspeed around the model are made with a hot-wire anemometer, a device that relates the cooling effect of the wind on a heated wire to the actual windspeed. The flow above the city is measured by a Pitot tube connected to a micromanometer. The Pitot tube and micromanometer measure directly the pressure difference between moving and still air. This pressure difference is then related to the actual windspeed. Flow visualization is achieved by use of floodlit smoke in conjunction with a 35-mm camera.

V. TESTING METHODOLOGY

Simulation of Flow

The most important factors in assuring similarity between flow around a model in a wind tunnel and flow around the actual building are the structure of the approach flow and the geometric similarity between the model and the prototype. A theoretical discussion of the exact criteria for similarity is not included in this paper, but may be found elsewhere (Cermak, 1966, or Cermak and Arya, 1970).

The variation of windspeed with height (wind profile) was adjusted for the scale of the model and the type of terrain upwind of the site. The profiles used were those generally accepted as adequately describing the flow over that type of terrain (Lloyd, 1967).

Testing Procedure

The windflow characteristics of the site in its present state were investigated to ascertain the present wind environment. Windspeeds and wind directions at specified points throughout the site were measured and recorded. Wind direction was measured by releasing smoke at each point and recording the direction in which the smoke traveled. Windspeed measurements were made at the same points, at a scale height of 5 ft. above the ground. A hot-wire anemometer probe is required to make these measurements within a fraction of an inch of the model surfaces. The probe is repeatedly calibrated against the absolute reading of a Pitot tube and micromanometer. Velocity readings close to the model are generally accurate to within 10% of the true velocity.

Measurements for building phases and alternatives are made by keeping the probe in place while replacing the existing buildings with each proposal under consideration.

Before and after each test run, a calibration measurement was made above the model. The purpose of these measurements was to relate the wind tunnel measurements to actual wind records from U.S. Weather Service wind instrumentation located on the Federal Building at 50 Fulton St., and to provide a method for comparing results to those of previous tests on other projects.

VI. TEST RESULTS AND DISCUSSION

Tests of windspeed and wind direction were conducted for 2 wind directions.

Measured windspeeds are expressed as percentages of the calibration windspeed, which corresponds to the actual windspeed at the San Francisco Weather Station. Thus a plotted value of 52 means that the measured windspeed is expected to be 52% of the windspeed recorded by the Weather Service when winds are from that particular direction.

The plotted values can be interpreted in terms of general "windiness" using the scale below. This scale is subjective and is based on information gathered from similar studies in San Francisco.

<u>Velocity Ratio</u>	<u>Ratio of Pedestrian Level Windspeed to Calibration Windspeed</u>
Low	- 0.19
Moderately low	0.20 - 0.29
Moderate	0.30 - 0.49
Moderately high	0.50 - 0.69
High	0.70 - 1.00
Very high	Greater than 1.00

It should be noted that the plotted values are not actual wind speeds, but ratios. Thus a point having a "very high" windspeed ratio would still experience light winds on a near-calm day. Likewise, a point found to have a "low" windspeed ratio could experience significant winds on an extremely windy day.

Wind direction is indicated by an arrow pointing in the direction of flow. Where wind direction fluctuated, 2 arrows representing the principal flow directions were plotted. Areas of fluctuating winds are normally turbulent, as are areas of spiraling motion; the latter are denoted by curved arrows.

Northwest Wind

Northwest winds occur 12% to 39% of the time in San Francisco, depending on the season. (In meteorology, a northwest wind blows from the northwest.) Northwesterly and westerly winds are the most frequent and the strongest winds at all seasons in San Francisco. Northwest winds exceed 13 mph 35% of the time and 25 mph 3% of the time in summer. Wind frequencies and speeds are lower in spring, fall and winter.

Existing conditions under northwest winds are shown in Figure C-1. Generally, the area has moderately high to high wind speed ratios, particularly at the Battery-Sacramento and Front-Sacramento intersections. Wind flows generally are along the north-south streets, with strength diminishing to the south. On the east-west streets, winds generally are turbulent, with speed ratios varying from moderate to moderately high. The podium level of the Embarcadero Center has high to very high wind speed ratios.

The construction of the proposed project would not affect basic air flow patterns except along Sacramento St., where the building would strengthen the east-west flow of air (see Figure C-2). The wind strength ratio would increase near the Halleck-Battery and California-Battery intersections, and east of the site along Sacramento St. Wind speed ratio decreases would occur along Halleck St. and Sacramento St. at the site. Wind speed ratios at the podium level of the Embarcadero would not change. Wind speed ratios at the bases of the 2 setbacks on Battery St. would be high, primarily due to the heights of the setbacks. The rear setback area would be sheltered from the wind.

The effects of Alternative 1 would be similar to those of the proposed project, although wind speed ratios would be greater (see Figure C-3) on Sacramento St. at the site and further to the east.

West Wind

West winds occur between 15% and 40% of the time, depending on the season. They exceed 13 mph 29% of the time and 25 mph 7% of the time in summer. Wind strengths and frequencies are somewhat lower in spring, fall and winter.

Site conditions under westerly winds are shown in Figure C-4. Because the site is sheltered by upwind buildings from this direction, winds are light, with ratios ranging from low to moderately low.

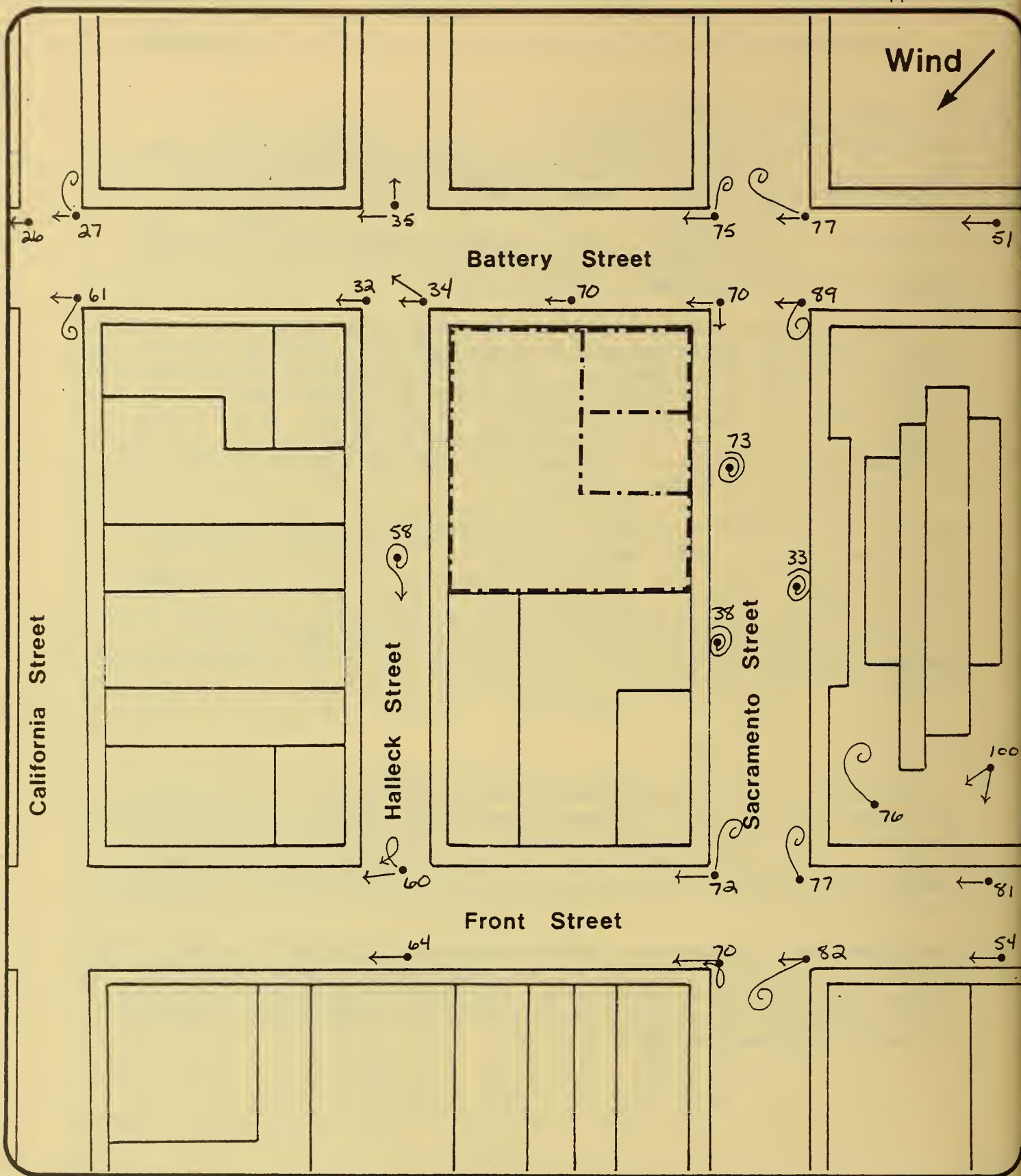
The proposed project would cause changes in the air flow patterns near the site (Figure C-5). The northerly flow along Battery St. would be reversed south of the site, and enhanced north of the site by the wind intercepted by the proposed building. Wind speed ratios at the Battery-Sacramento intersection would increase from moderately low to moderate, as would wind speed ratios on the west side of the Halleck-Battery intersection. Wind speed ratios along both Halleck and Sacramento Sts. would be accelerated from low and moderately low to moderate speeds.

Alternative 1 would have a similar effect along Battery Street, although the wind speed ratios increases would be greater. This probably is due to the less irregular shape of the western elevation of the building, which makes it less streamlined and more of an obstacle to the wind. With this alternative there would be a greater increase in wind speed ratio along Halleck St. than with the proposed project, but there would be a smaller increase along Sacramento east of the site. This is apparently due to the passageway between Halleck and Sacramento.

VII. MITIGATION MEASURES

An effective mitigation measure would involve additions to the project that would provide local shelter for pedestrians. Small structures, such as kiosks for newspaper or flower vendors, telephone booths and shelters at bus stops, can serve in this way. Similarly, street trees and other vegetation can function as windbreaks. These measures would be appropriate along Sacramento and Battery Streets.

The upper-level, outdoor spaces formed by the building setbacks (at 78 and 189 ft. heights) have high wind speed ratios, and would not appear to be usable as outdoor space without wind protection. Glass walls, vegetation and screening would provide protection, although enclosure of the areas might be necessary to ensure comfortable conditions.

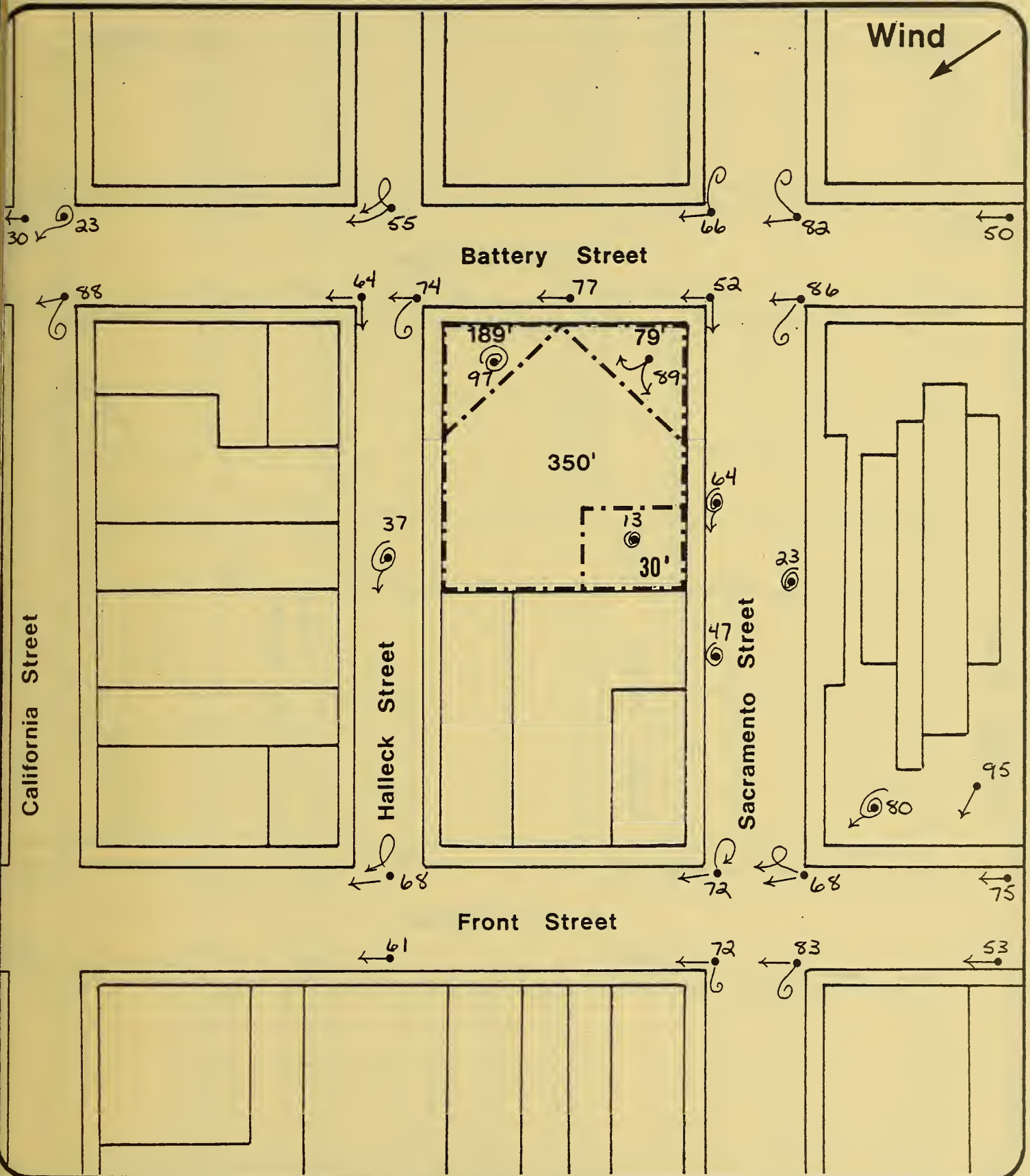


Existing Site
Wind-Northwest

LEGEND

- 58 Wind speed ratio at monitoring location
 Wind direction at monitoring location



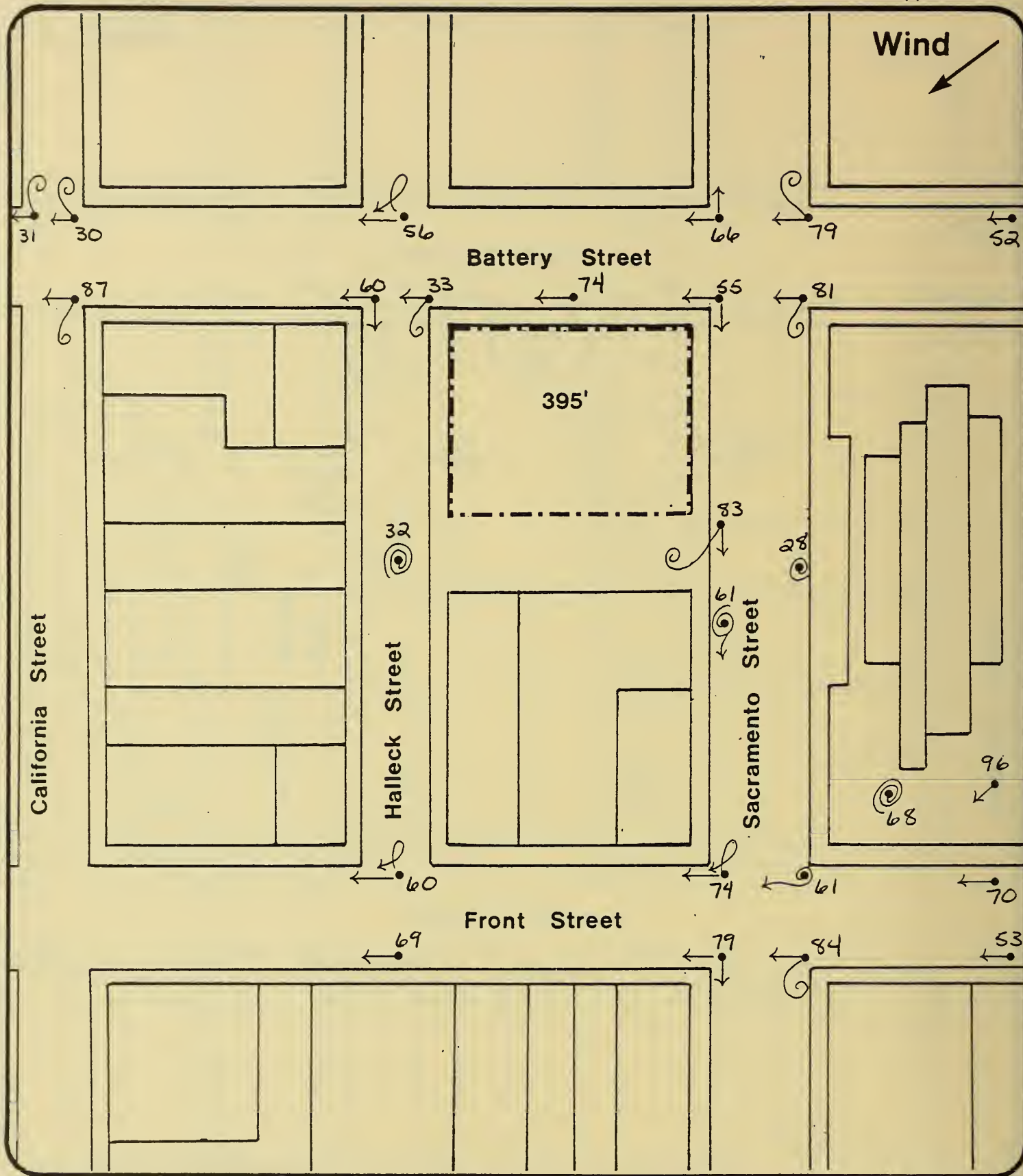


Proposed Project Wind-Northwest

LEGEND

- 58 Wind speed ratio at monitoring location
- Wind direction at monitoring location
- North
- Not to Scale

Figure No. C-2



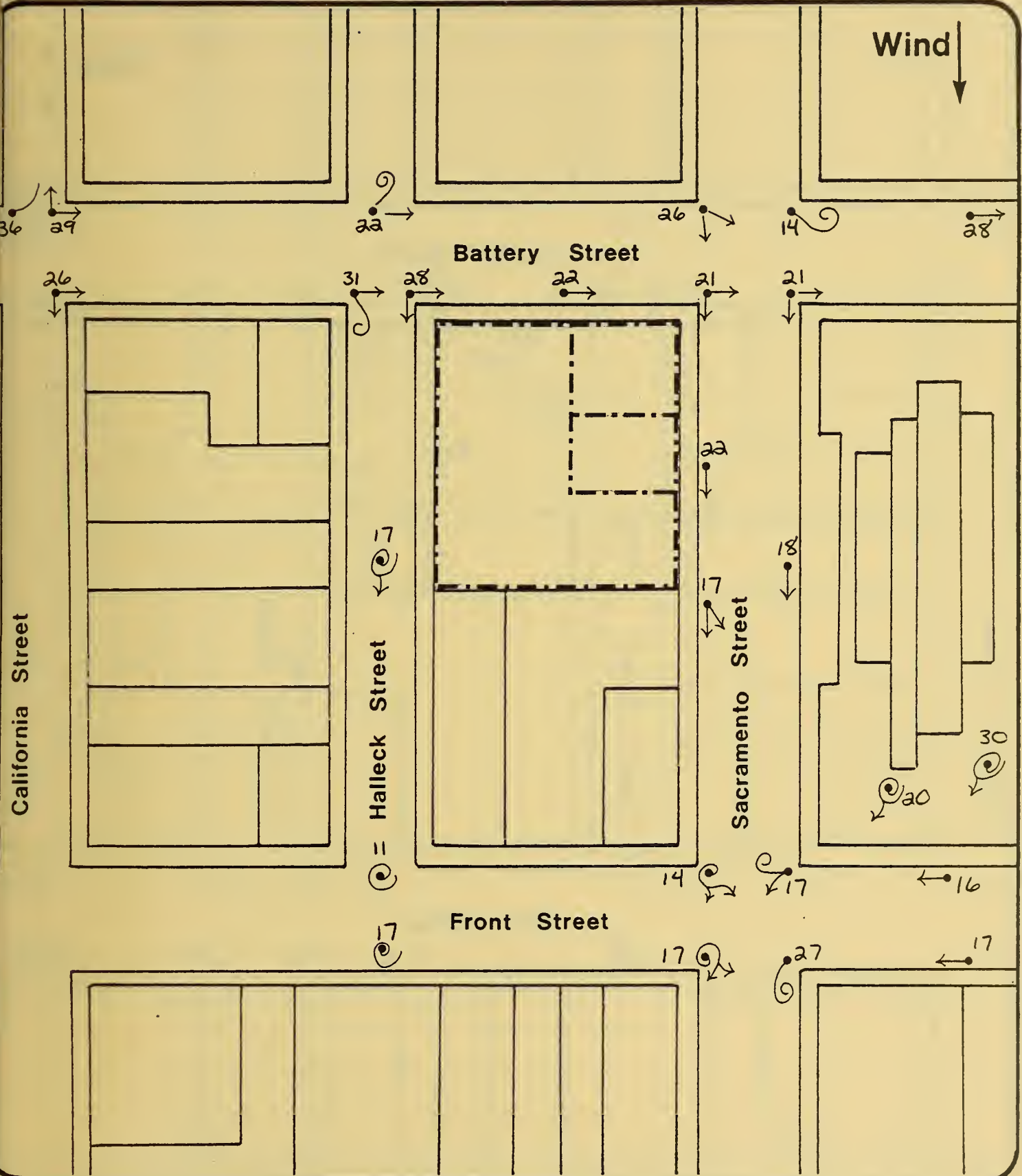
Alternative 1 Wind-Northwest

LEGEND

- 58 Wind speed ratio at monitoring location
- Wind direction at monitoring location



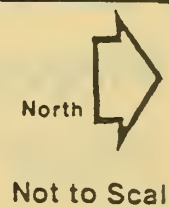
Not to Scale

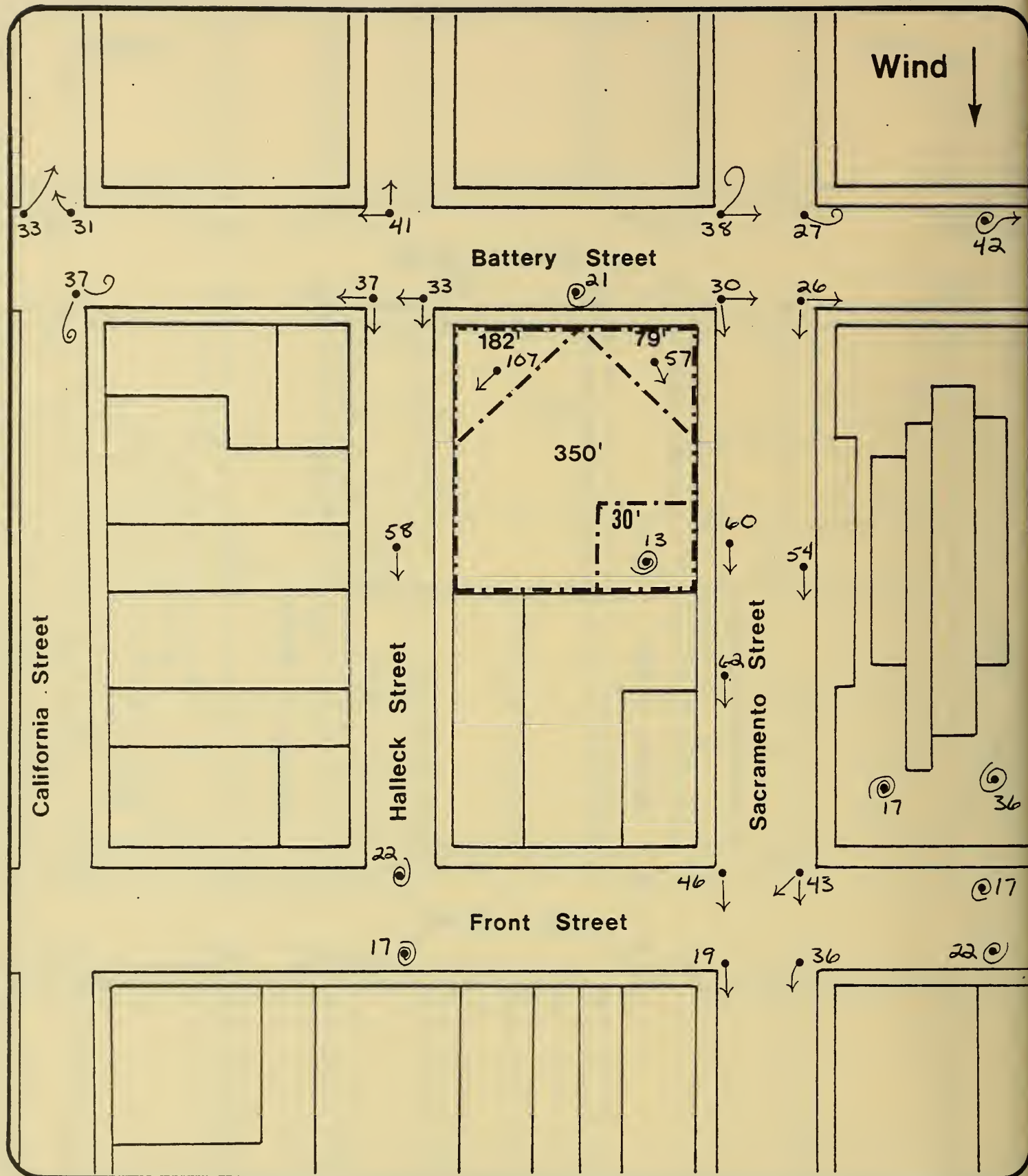


Existing Site Wind-West

LEGEND

- 58 Wind speed ratio at monitoring location
- ↻ Wind direction at monitoring location





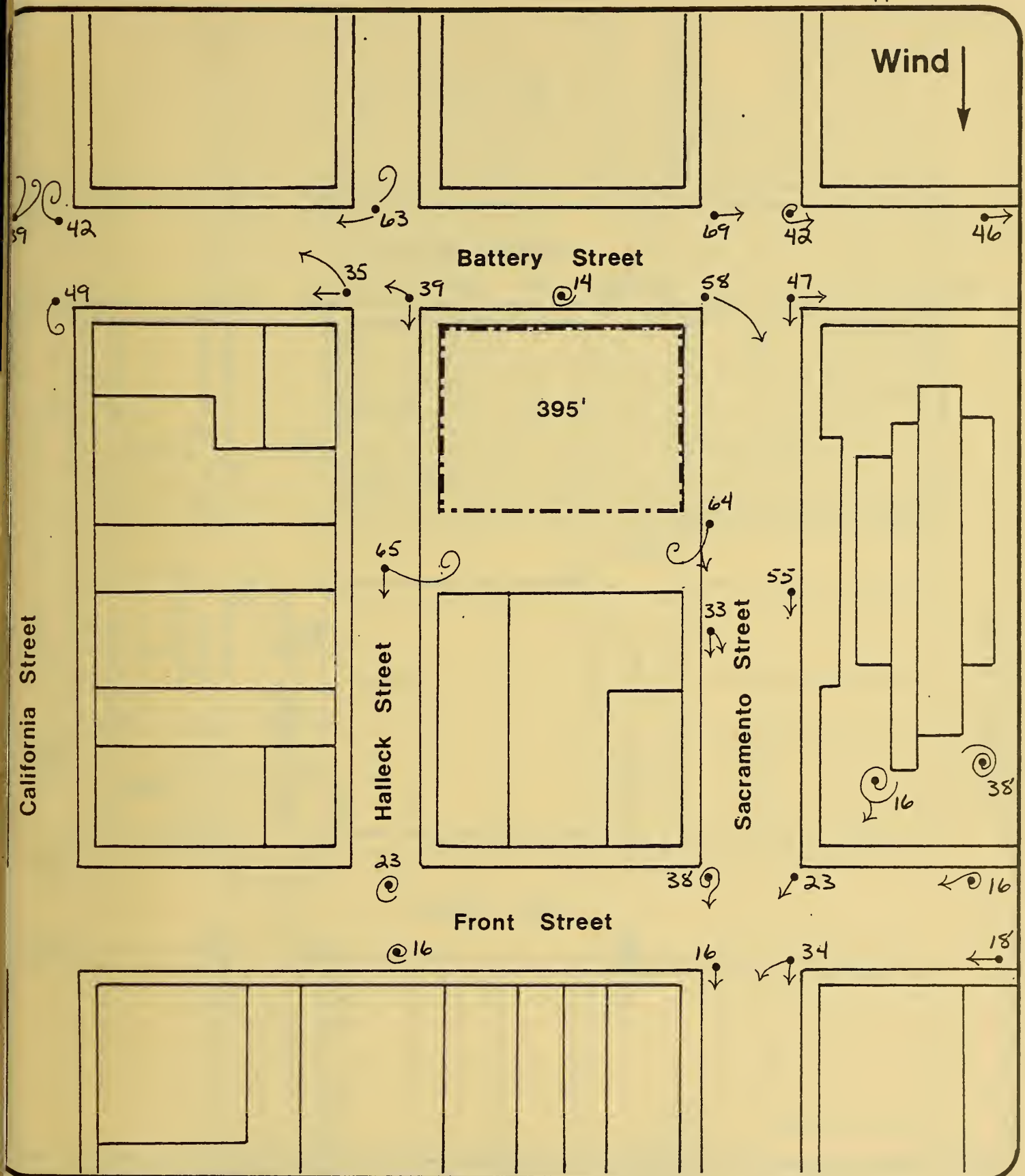
Proposed Project Wind-West

LEGEND

- 58 Wind speed ratio at monitoring location
 ↻ Wind direction at monitoring location



Not to Scale



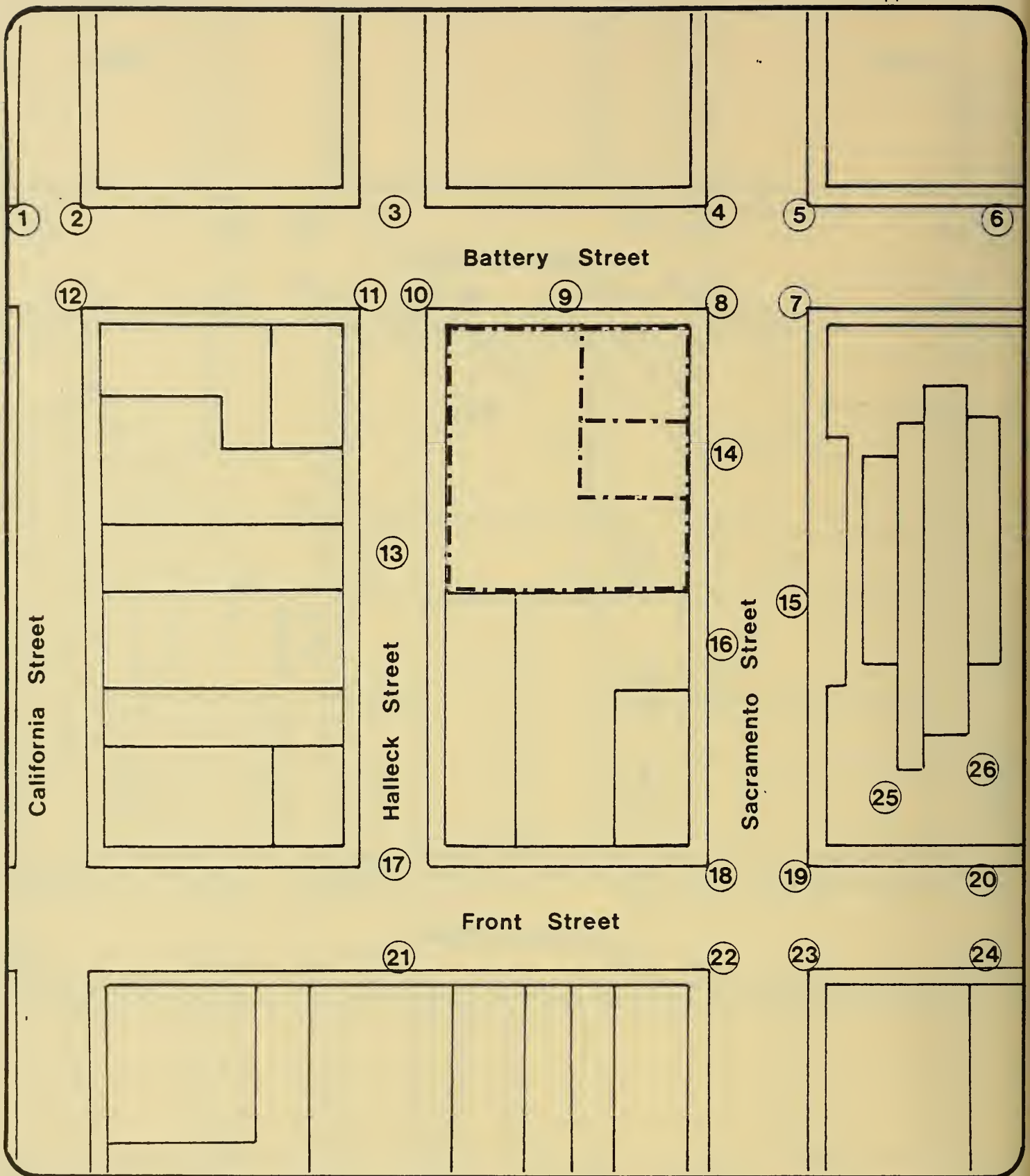
Alternative 1 Wind-West

LEGEND

- 58 Wind speed ratio at monitoring location
- ⌀ Wind direction at monitoring location



Not to Scale



Monitoring Stations



Not to Scale

TABLE D-1: BLOCK 237, LOTS 14, 15 and 16: TENANTS BY BUILDING, EXISTING USES, EMPLOYMENT AND RELOCATION STATUS

Floor	Tenant	Type of Business Use	Approximate Occupied Area (total sq. ft.)	Approximate Number of Employees	Current Relocation Status and Impacts on Tenants (November 1979)
<u>240-248 Battery St. Building (includes 335-337 Sacramento St.)</u>					
1st	Gourmet Plate	Restaurant	2,731	7	One-year demolition clause in lease. According to tenant, it would be difficult to find a suitable location replacement within the 1-year notification period. Tenant is interested in space in new building, but expense may be too great. Moving to a temporary location during building construction would be difficult because a large amount of equipment would have to be moved. (S. Chinn, Owner, The Gourmet Plate, telephone communication, 11 November 1979).
1st	Stone Soup (owned by Souper Soupe Corporation)	Restaurant	4,220	19	Six-month demolition clause in lease. There is a small chance that the restaurant might move to a new location in same general area. Then, according to tenant, there would probably not be a large loss of clientele. Financial losses would be great if the restaurant were moved, due to extensive remodelling costs. Were Stone Soup to move to the proposed building, it would require rental space on the ground floor; the business would close during construction. However, according to the tenant, Stone Soup would probably not move to the new building (R. Delmon, President, Souper Soupe Corporation, telephone communication, 19 November 1979).

Table D-1, Continued

Floor	Tenant	Type of Business Use	Approximate Occupied Area (total sq. ft.)	Approximate Number of Employees	Current Relocation Status and Impacts on Tenants (November 1979)
<u>240-248 Battery St. Building (includes 335-337 Sacramento St.)</u>					
1st	Vaughn-at-Sather Gate, Inc.	Men's Clothing	3,000	5	Six-month demolition clause in lease. According to the tenant, it would be difficult for them to relocate within the demolition notification period. Their clientele requires a Financial District location; they prefer a location near to their current one. Financial losses anticipated by the tenant include moving and decorating costs, as well as a loss in gross sales in the range of \$100,000 to \$200,000 due to a less advantageous location. Tenant would be interested in space in the new building if rental costs were not too high (R. Glass, Controller, Vaughn-at-Sather Gate, Inc., telephone communication, 13 November 1979).
2nd	M. Arthur Gensler, Jr. and Associates, Inc.	Architecture	11,740	142	One-year termination clause in lease. Relocation would involve moving the firm's offices from 3 buildings that would be demolished as a result of the proposed project (28,000 sq. ft. of floor space) as well as from the nearby 550 Kearny St. Building (8000 sq. ft. of floor space) as the firm's offices must be in the same vicinity. Tenant would have to find space within the Financial District. Tenant would not rent offices in proposed building because that would involve moving twice. According to the tenant, rental costs at a new location would be higher (A. Gensler, M. Arthur Gensler, Jr. and Associates, Inc., telephone communication, 14 November 1979).
Base-ment	"	Storage of Records	3,000		

Table D-1, Continued

Floor	Tenant	Type of Business Use	Approximate Occupied Area (total sq. ft.)	Approximate Number of Employees	Current Relocation Status and Impacts on Tenants
<u>240-248 Battery St. Building</u>					
1st	Snappy Foto (owned by Perfection Processors, Inc.)	Photography Store	250	2	Space subleased from M. Arthur Gensler, Jr. and Associates, Inc. Tenant would try to relocate, but anticipates difficulty in relocating; has been searching for another location in the same vicinity for 12 months. Tenant needs location with many pedestrians; would consider space in proposed building (G. Haag, Owner, Perfection Processors, Inc., telephone communications, 25 November 1979).
1st	M. Arthur Gensler, Jr. and Associates, Inc.	Architecture	1,000		Under 240 Battery St. Building
2nd	"	"	1,500		"
<u>353 Sacramento St. Building</u>					
1st	"	"	3,220		"
2nd	"	"	1,560		"
3rd	Hodge & Clark	Law Firm	2,400	12	One-year demolition clause in lease. According to tenant, it would be difficult to relocate. A move would probably increase overhead costs by approximately 25% due to an increase in rental costs. Tenant would not rent in proposed building because this would involve moving to a temporary location (J. Hodge, Principal, Hodge and Clark, telephone communication, 14 November 1979).

Table D-1, Continued

Floor	Tenant	Type of Business Use	Approximate Occupied Area (total sq. ft.)	Approximate Number of Employees	Current Relocation Status and Impacts on Tenants
<u>353 Sacramento St. Building</u>					
4th	Mike McCormac Realtors Embarcadero Mortgage Corporation Pichey Associates (office space shared by the above 3 firms)	Real Estate	1,500	9 (all three firms)	One-year demolition clause in lease. Tenants feel that they would be able to find appropriate new space within the notification period. Tenants would consider moving into proposed building; this would involve moving to a temporary location during construction (M. McCormac, Embarcadero Mortgage Corporation and Mike McCormac Realtors, telephone communication, 13 November 1979; E. Spinney, Office Manager, Pichey Associates, telephone communication, 16 November 1979).
5th	Helen Culiner, Attorney	Law Office	1,500	4	One-year demolition clause in lease. Tenant would definitely relocate. According to tenant, it would be difficult to relocate in the vicinity within the lease's notification period. Unlikely that this tenant would move into proposed building (H. Culiner, telephone communication, 13 November 1979).
6th	William J. Healey & Associates	Advertising Space Sales	1,500	7	One-year demolition clause in lease. According to tenant, it would be difficult for them to find other space in San Francisco. Rents in proposed building are expected to be too high. Most business is in the Santa Clara - San Jose area, so might move to that area (W. Healey, telephone communications, 20 November 1979).
Base-ment	Helen Culiner, Attorney	Law Firm Storage Space	215		

Table D-1, Continued

Floor	Tenant	Type of Business Use	Approximate Occupied Area (total sq. ft.)	Approximate Number of Employees	Current Relocation Status and Impacts on Tenants
<u>353 Sacramento St. Building, cont.</u>					
Base-	Carroon and Black/Miller and Ames	Insurance Brokerage Storage Space	720	Not Applicable, Storage Space Only	Probably would switch to storing files in an archival system,* this could result in labor savings. According to tenant, it would be difficult to find storage space similar to what they have now. Space in proposed building would be too expensive for this use (M. Hilton, Vice President, Carroon and Black/Miller and Ames, telephone communication, 13 November 1979; L. Ginsberg, Personnel Manager, telephone communication, 14 November 1979).

*A storage system where contracting storage company retrieves and brings over desired files.

Sources: Tenants as noted; B. Azarin, Assistant Project Manager, Daon Southwest, telephone communications, October and November 1979, and letter communication 24 October 1979; M. Jayred, President, M and T Properties, telephone communications, November 1979 and letter communication, 15 November 1979.

APPENDIX E: ECONOMIC AND FISCAL ASPECTS

TABLE E-1: DISTRIBUTION OF 1979-80 PROPERTY TAXES LEVIED ON BLOCK 237,
LOTS 14, 15 AND 16

	1979-80 Tax Rate (dollars per \$100 assessed value)	Revenues (to nearest \$100)	Percent
City and County of San Francisco	4.219	16,300	85
San Francisco Unified School District	0.344	1,300	7
San Francisco Community College District	0.058	200	1
Bay Area Air Quality Management District	0.008	**	**
BART	<u>0.341</u>	<u>1,300</u>	<u>7</u>
TOTAL	4.970	19,100	100

*Based on total 1979-80 assessed valuation of \$385,635 for 3 parcels.

**Revenues less than \$50.00 (\$31.00) and tax rate less than 1% (0.016%) of the total tax rate..

SOURCE: Tax Collector, City and County of San Francisco, 1979-1980 Important Tax Information, 1979.

● TABLE E-2: POST-WAR OFFICE GROWTH IN DOWNTOWN SAN FRANCISCO*

Completed	Period Years	Number	Total Gross Square Feet (millions)	Building Average Square Feet (thousands)	Range Square Feet (thousands)	Annual Average Rate Square Feet (thousands)	Range # of Stories
1945-1949	5	3	0.5	178	100 to 250	100	11 - 14
1950-1959	10	10	2.4	240	138 to 430	240	7 - 25
1960-1969	10	22	10.3	468	119 to 1,771	1,030	10 - 52
1970-1979	10	24	15.4	642	100 to 1,375	1,540	11 - 48
1980**	1	5	1.7	340	144 to 728	--	15 - 38
Subtotal Built	--	64	30.3	--	--	--	--
Under Construction**							
1979-1983	5	5	4.2	840	220 to 1,306	840	12 - 48
Proposed+							
1981-1982	2	2	.5	250	223 to 259	250	18 - 24
To Be Proposed (Under EIR Review)++							
1981	1	2	1.0	500	289 to 680	--	24 - 42
Subtotal Pending	--	9	5.7	--	--	--	--
TOTAL		73	36.0				

*The Table is based on a telephone communication with C. Gill, Major Project Review, Department of City Planning, 30 November 1978 and on lists compiled by the San Francisco Department of City Planning which are available for public review at the Department of City Planning, Office of Environmental Review.

**Buildings scheduled for completion by the end of 1980 include 505 Sansome St., 601 Montgomery St., Hibernia Bank (California and Front Sts.), 180 Montgomery St., and 444 Market St.

***Under Construction: Four Embarcadero Center, Federal Reserve Bank, Pacific Gateway, Crocker National Bank Headquarters, and 101 California St.

+Proposed: 456 Montgomery St. and 150 Spear St.

++Under EIR Review: Daon Building and One Sansome St. An addendum list is on file at the Office of Environmental Review, titled "Major Office Buildings Proposed and To Be Proposed, First Quarter 1980."

APPENDIX F: TRAFFIC, TRANSIT AND PARKING

METHODOLOGY USED IN TRAFFIC ANALYSIS

The traffic volume data shown in Table 4, p. 35, are derived from historical data for 1976 and 1977 obtained from the San Francisco Department of Public Works, Bureau of Traffic Engineering, and from machine traffic counts made by TJKM, transportation consultants, on various weekday dates in 1978. Estimates of some 1978 traffic volumes were made by TJKM based on manual intersection count data made by TJKM on 25, 27, and 28 September 1978, and on the historical data for 1976 and 1977.

The capacity analysis of each intersection at which a turning movement count was made utilized the "critical lane" method. This method of capacity calculation is a summation of maximum conflicting approach lane volumes that gives the capacity of an intersection in vehicles per hour per lane. (This method is explained in detail in an article entitled "Intersection Capacity Measurement Through Critical Movement Summations: a Planning Tool", by McInerney, Henry B. and Stephen G. Peterson, January 1971, Traffic Engineering.) A sample calculation is included in the supporting documentation available for public review at the Department of City Planning, Office of Environmental Review.

The maximum service volume for Level of Service E was assumed as a benchmark. A service volume is the maximum number of vehicles that can pass an intersection during a specified time period in which operating conditions are maintained corresponding to the selected and specified level of service. For each intersection analyzed, the existing peak-hour volume was computed and a volume-to-capacity (v/c) ratio was calculated by dividing the existing volume by the capacity at Level of Service E.

TABLE F-1: TRAFFIC LEVELS OF SERVICE

Level of Service	Description	Volume/Capacity v/c Ratio
A	Level of Service A describes a condition of free flow, with low volumes and high speeds. Traffic density is low, with speeds controlled by driver desires, speed limits, and physical roadway conditions. There is little or no restriction in maneuverability due to the presence of other vehicles, and drivers can maintain their desired speeds with little or no delay.	0.60
B	Level of Service B is in the zone of stable flow, with operating speeds beginning to be restricted somewhat by traffic conditions. Drivers still have reasonable freedom to select their speed and lane of operation. Reductions in speed are not unreasonable, with a low probability of traffic flow being restricted. The lower limit (lowest speed, highest volume) of this level of service has been associated with service volumes used in the design of rural highways.	0.61-0.70
C	Level of Service C is still in the zone of stable flow, but speeds and maneuverability are more closely controlled by the higher volumes. Most of the drivers are restricted in their freedom to select their own speed, change lanes, or pass. A relatively satisfactory operating speed is still obtained, with service volumes perhaps suitable for urban design practice.	0.71-0.80
D	Level of Service D approaches unstable flow, with tolerable operating speeds begin maintained though considerably affected by changes in operating conditions. Fluctuations in volume and temporary restrictions to flow may cause substantial drops in operating speeds. Drivers have little freedom to maneuver, and comfort and convenience are low, but conditions can be tolerated for short periods of time.	0.81-0.90
E	Level of Service E cannot be described by speed alone, but represents operations at even lower operating speeds than in Level D, with volumes at or near the capacity of the highway. Flow is unstable, and there may be stoppages of momentary duration.	0.91-1.00
F	Level of Service F describes forced flow operation at low speeds, where volumes are below capacity. These conditions usually result from queues of vehicles backing up from a restriction downstream. Speeds are reduced substantially and stoppages may occur for short or long periods of time because of downstream congestion. In the extreme, both speed and volume can drop to zero.	1.00

SOURCE: Highway Research Board, 1965, Highway Capacity Manual, Special Report 87.

TABLE F-2: PEDESTRIAN LEVELS OF SERVICE

Level of Service	Walking Speed Choice	Conflicts	Pedestrian Flow Rates (P/F/M)*	
			One-Way Flow (Commuters)	Two-Way Flow (Shoppers, etc.)
A	Free Selection	None	8	7
B	Some Selection	Minor	8-11	7-9
C	Restricted	High Probability	11-16	9-14
D	Some Reduction	Multiple	16-21	14-19
E	All Reduced	Frequent	21-26	19-23
F	Shuffle Only	Unavoidable	26**	23**

*P/F/M = Pedestrians per foot of sidewalk width per minute.

**At Level F, the (attempted) flow rate degrades to zero at complete breakdown.

SOURCE: Fruin, J.J., 1971, Pedestrian Planning and Design, Metropolitan Association of Urban Designers and Environmental Planners, New York, N.Y.

TABLE F-3: GEOGRAPHICAL DISTRIBUTION ANALYSIS

REGION	SURVEY/STUDY					AVERAGE
	EE 79.178*	LEVI STRAUS	CROCKER BANK	ITEL	MTC	
San Francisco	40	43	41	35	51	42
NE	7		7	8		8
NW	15		15	22		19
SW	13		12	4		10
SE	5		7	1		5
East Bay	30	26	31	30	17	27
Peninsula	18	15	17	16	20	17
North Bay	12	16	11	19	12	14
						100

* Federal Reserve Bank was included in this analysis.

TABLE F-4: PROJECT TRAVEL DISTRIBUTION AND MODAL SPLIT

Geographic Area	Work Travel			Non-Work Travel		
	Distribution	Modal Split		Distribution	Modal Split	
San Francisco						
Downtown/Northeast (East of Van Ness, North of Market St. to the Embarcadero & South of Market to 101)	8%	Auto	9%	23%	Auto	40%
		Muni	61%		Muni	50%
		BART	1%		Walk	10%
		Walk	29%			
Northwest						
(Richmond, Marina and Western Addition)	19%	Auto	31%	21%	Auto	55%
		Muni	69%		Muni	45%
Southwest						
(Sunset, Parkside, Ingleside, Excelsior, Twin Peaks, and Upper Market)	10%	Auto	29%	15%	Auto	55%
		Muni	62%		Muni	36%
		BART	9%		BART	9%
Southeast						
(Potrero Hill, Bayview, Hunters Point, East and South of 101)	5%	Auto	26%	16%	Auto	60%
		Muni	52%		Muni	40%
		BART	22%			
Peninsula						
(San Mateo and Santa Clara Counties)	17%	Auto	44%	12%	Auto	80%
		Muni	3%		Sam Trans	3%
		BART	19%		SPRR	17%
		Sam Trans	7%			
		SPRR	27%			
East Bay						
(Alameda and Contra Costa Counties)	27%	Auto	33%	11%	Auto	85%
		A-C Transit	30%		A-C Transit	4%
		BART	37%		BART	11%
North Bay						
(Marin and Sonoma Counties)	14%	Auto	58%	2%	Auto	73%
		GGT Bus	35%		GGT Bus	19%
		GGT Ferry	7%		GGT Ferry	8%

METHODOLOGY USED IN CUMULATIVE TRAFFIC AND PARKING IMPACT ANALYSIS

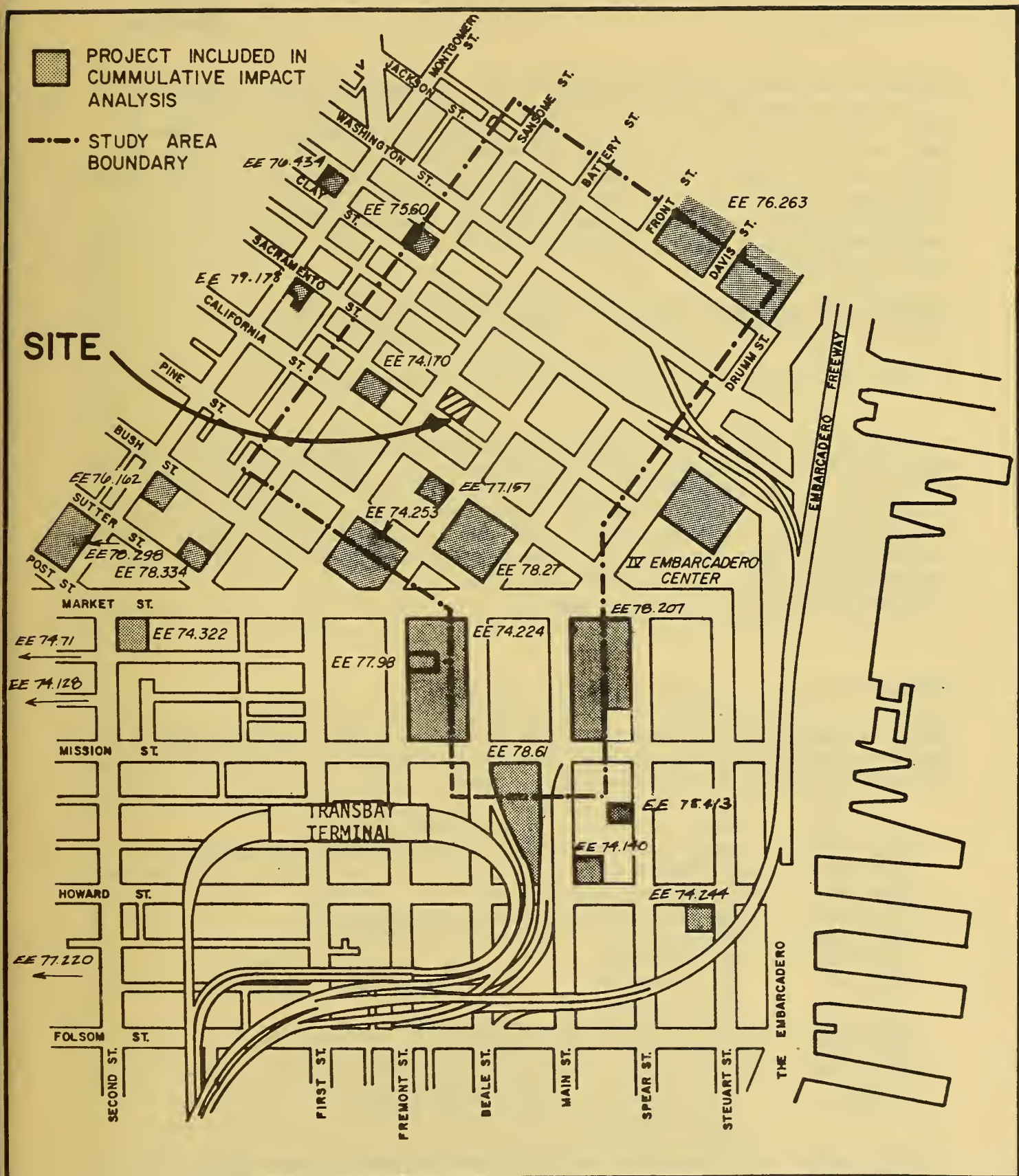
The buildings which were subject to the cumulative traffic and parking analyses are in or near the Financial District (see Figure F-1 p. 162 of the Draft EIR) and are listed below by their Office of Environmental Review EIR file number and name:

EE 74.140	Howard and Main Sts. (Northeast corner)
EE 74.170	Bank of Tokyo of California (California First Bank)
EE 74.224	333 Market St.
EE 77.98	333 Market St. addendum
EE 74.244	Parking Structure, Howard and Steuart Sts.
EE 74.253	444 Market St.
EE 74.322	595 Market St.
EE 75.60	505 Sansome St.
EE 76.162	180 Montgomery St.
EE 76.263	Golden Gateway Commons Center Plaza Phase III
EE 76.434	601 Montgomery St. (Negative declaration)
EE 77.220	Yerba Buena Center (Convention Center only)
EE 78.61	Pacific Gateway (Administrative Draft)
EE 78.27	101 California St.
EE 78.334	One Sansome St.
EE 78.298	Crocker National Bank
No EE #	Four Embarcadero Center
EE 78.207	Federal Reserve Bank
EE 78.413	150 Spear St.
EE 79.178	456 Montgomery St. DEIR

Because none of the above buildings was in operation in 1976, the base year used for the cumulative analysis was 1976. As the above buildings do not comprise all of the projected growth in San Francisco, it was necessary to use a growth factor to forecast 1981 base traffic volumes (similar to the method described in the Draft EIR on p. 77, Traffic Impacts.) The traffic growth rate of 1.0% per year used in the Traffic section was adjusted by TJKM to reflect only growth from projects not listed above (i.e., the rate was adjusted to remove travel from the above buildings). The adjusted growth rate used was 0.7% per year./1/ Information on the amount of traffic generated by each project that would affect the streets in the Financial District was derived from the EIR or special traffic report on each project. The cumulative traffic from the analyzed projects was added to the 1981 base traffic. Finally, the projected traffic volumes generated by the proposed Daon Building were added to the sum of the 1981 base and cumulative traffic volumes. A similar analysis was conducted to determine cumulative parking impacts.

NOTE - Appendix F

/1/ To adjust the growth rate to account for the cumulative analysis TJKM used a ratio based upon office growth during a specified period for which a documented traffic growth rate was known. The last documented traffic growth rate developed for downtown San Francisco was 1.8% per year for the years 1965 to 1970 developed during the Downtown Parking and Traffic Study (DPATS). The



SOURCE: TJKM

FIGURE F-1: PROJECTS INCLUDED IN CUMULATIVE TRANSPORTATION ANALYSIS



assumption was made that the growth per year in traffic would be proportional to the growth per year in office space. For the years 1965 to 1970 approximately 8,000,000 sq. ft. of office space was constructed in downtown San Francisco. This is an average of approximately 1.7 million sq. ft. of office space per year. The amount of office growth exclusive of the buildings considered in the cumulative analysis was determined from OER records to be 1.2 million sq. ft. per year between 1979 and 1981 (the period of the cumulative analysis). Thus, the ratio of office growth to traffic growth was established as follows:

$$\frac{1979-1981 \text{ office growth per year}}{1965-1975 \text{ office growth per year}} = \frac{\text{adjusted growth per year}}{\text{base traffic growth per year}}$$

$$\text{or adjusted traffic growth/year} = \frac{1.2}{1.7} \times (\text{base traffic growth/year})$$

As the 1.8% per year traffic growth rate has been considered to exceed the current rate of growth, the traffic growth rate of 1.0% per year has been used as the base growth (See Note/6/ revised Transportation, Circulation and Parking section). As no documentable data base for the 1.0% per year rate exists, the assumption was made that the ratio established above would remain valid with the lower growth rate. Thus the adjusted growth rate of 0.7% per year was calculated from the above formula:

$$(0.7\% \text{ per year} = \frac{1.2}{1.7} \times 1.0\% \text{ per year}).$$

METHODOLOGY USED IN CUMULATIVE TRANSIT ANALYSIS

The buildings which were subject to the cumulative transit analysis are in or near the Downtown business district and are listed below by their Office of Environmental Review EIR file number and name:

EE 74.140	Howard and Main Sts. (northeast corner)
EE 74.170	Bank of Tokyo of California (California First Bank)
EE 74.224	333 Market St.
EE 77.98	333 Market St. addendum
EE 74.244	Parking Structure, Howard and Steuart Sts.
EE 74.253	444 Market St.
EE 74.322	595 Market St.
EE 75.60	505 Sansome St.
EE 76.162	180 Montgomery St.
EE 76.263	Golden Gateway Center Phase III
EE 76.434	601 Montgomery St. (Negative declaration)
EE 77.220	Yerba Buena Center (Convention Center only)
EE 78.61	Pacific Gateway (Administrative Draft)
EE 74.71	State Compensation Insurance Building (Ninth & Market Sts.)
EE 74.128	Bank of America Data Center (Eleventh & Market Sts.)
EE 77.220	775 Market St. Office Building (Yerba Buena Center)
EE 77.157	Hibernia Bank (California & Front Sts.)
No EE #	Four Embarcadero Center
EE 78.207	Federal Reserve Bank (Market & Main Sts.)

EE 78.334	One Sansome St.
EE 78.27	101 California St.
EE 78.298	Crocker National Bank
EE 78.413	150 Spear St.
EE 79.178	456 Montgomery St. DEIR

Afternoon peak-hour ridership, exclusive of the buildings listed above, was projected by TJKM from 1978 to 1981 base levels by using a growth factor for each transit agency. The projections were based on information gathered from each agency. For SamTrans and Southern Pacific Railroad (SPRR), SamTrans demand projections were used. Mr. L. Stueck of SamTrans supplied the demand projections for average daily and total yearly patronage for the years 1978 to 1985 for the block of routes that include the mainline routes. A SamTrans projection of SPRR ridership from San Mateo County was also supplied. The percent increase per year for SamTrans and SPRR were calculated from this data. For Golden Gate Transit, the systemwide percent per year increase stated on Page 4-1 of the "Final EIR on Proposed Toll and Fare Increases" (dated July 1978) was used. For BART and A-C Transit the daily ridership for years 1974 through April 1978 was used to project a growth trend. The patronage data was taken from "BART Impact Project - Traffic Survey Series" A-43 to A-50 (October 1974 to April 1978). The growth trend was projected using a linear regression. A total percent increase from 1978 to 1981 was calculated for A-C and BART separately. For Muni, the systemwide increases projected by the Planning, Operations and Marketing (P-O-M) study (Wilbur Smith and Assoc., 1975) were compared to the 1975 data to develop a percent per year increase.

The above growth factors were assumed to reflect total growth (1978 to 1981). An adjustment similar to the adjustment made for traffic growth (i.e. relating the growth in transit ridership to the projected office space increases) was made. The growth factors were then recalculated to reflect growth exclusive of the buildings listed above. In this case, the office space included in the cumulative projects was assumed to account for 77% of the total growth.

The cumulative ridership from the listed projects was added to the 1981 base ridership thus determined, and the Daon Building ridership was added to the resulting totals. The total ridership increase on Muni cannot be reliably disaggregated on a line-by-line basis because insufficient data are available (C. Kinzel, Traffic Engineer, TJKM, letter communication, 9 May 1979. This letter is available for public review at the Department of City Planning, Office of Environmental Review).

Analysis of the demand-to-capacity ratios was made including known planned expansion of capacity for each transit agency. Thus, the only changes made between 1978 capacity and 1981 capacity were the previously defined changes on BART, Muni Metro and the Golden Gate Transit Larkspur Ferry. None of the other capacities were increased since no documented (definite) projected increases could be obtained. The capacity increases were assumed to be 7,390 persons per hour total for Muni; 1,620 persons per hour (1,080 seats per hour) total for BART; and 750 persons per hour total for Golden Gate Transit on the Larkspur Ferry only.

APPENDIX G: SAN FRANCISCO AIR QUALITY

Meteorological characteristics such as wind patterns and thermal inversions determine the movement and dispersion of air pollutants. The prevailing wind directions in San Francisco are from the west and northwest. Wind frequencies and speeds are generally highest in the summer. Light-variable wind conditions occur approximately 25% of the time on an annual basis. A thermal inversion (an inverted vertical temperature structure of the atmosphere consisting of warm air above cool air) is a stable atmospheric condition that inhibits the upward dispersion of air pollutants and traps them in a layer near the ground. High-altitude subsidence inversions, associated with warm descending air in a high-pressure cell which may last for several days, occur most of the time in summer and fall. Low-altitude radiation inversions, caused by radiation of heat from the earth's surface into cold nighttime air and usually dissipating by noon, occur most of the time in winter.

Much of San Francisco is generally upwind of major pollutant sources such as industrial areas, airports, freeways and other urban activities. San Francisco is more a contributor to its own air quality problems and to those in other parts of the Bay Area than a recipient of pollutants from other areas. When atmospheric stagnation occurs (as the result of light-variable wind conditions coupled with thermal inversions, most commonly in the fall and winter), the potential exists for the entire Bay Area Air Basin to experience high concentrations of pollutants. Thus, air quality is both a local and regional problem.

The Bay Area Air Quality Management District (BAAQMD) monitoring station at 939 Ellis Street is located on the roof of the 9-story building. While measurements there indicate daily, seasonal, and annual meteorological and air quality trends, it is not clear how well the measurements represent conditions at street level near the station or elsewhere in the City.

TABLE G-1: SAN FRANCISCO AIR POLLUTANT SUMMARY 1976-1978

STATION: 939 Ellis Street, San Francisco

POLLUTANT	STANDARD	1976	1977	1978
OZONE (O ₃) (Oxidant)				
1-hour concentration (ppm)/a/ Highest hourly average	0.08/b,c/	0.13	0.05	0.11
Number of standard violations		2	0	4
CARBON MONOXIDE (CO)				
1 hour concentration (ppm) Highest hourly average	35/b/	22	16	17
Number of standard violations		0	0	0
8 hour concentration (ppm) Highest 8-hour average	9/b/	11.0	8.9	9.4
Number of standard violations		4	0	1
NITROGEN DIOXIDE (NO ₂)				
1 hour concentration (ppm) Highest hourly average	0.25/d/	0.25	0.21	0.30
Number of standard violations		1	0	4
SULFUR DIOXIDE (SO ₂)				
24 hour concentration (ppm) Highest 24-hour average	0.05/d,e/	0.053	0.035	0.024
Number of standard violations/f/		1	0	0
TOTAL SUSPENDED PARTICULATE (TSP)				
24 hour concentration (ug/m ³)/g/ Highest 24-hour average	100/d/	136	105	128
Number of standard violations/f/		8	1	1
Annual concentration (ug/m ³) Annual Geometric Mean	60/d/	55	41	42
Annual violation		No	No	No

/a/ ppm: parts per million.

/b/ Federal standard.

/c/ The ozone standard was revised from 0.08 ppm to 0.12 ppm in January 1979. The number of violations shown are of the standard in effect at that time.

/d/ California standard.

/e/ The sulfur dioxide standard is considered to be violated only if there is a concurrent violation of the ozone or the suspended particulate standard at the same station.

/f/ Number of observed violation days (measurements taken approximately once every six days in 1978 and 1977; once every three days in 1976).

/g/ ug/m³: micrograms per cubic meter.SOURCE: Bay Area Air Quality Management District (formerly Bay Area Air Pollution Control District), Contaminant and Weather Summaries.

APPENDIX H: IMPACT OF CUMULATIVE DOWNTOWN DEVELOPMENT ON COMMUNITY SERVICES AND UTILITIES

The buildings proposed, under construction, and recently built which were used to calculate the estimated cumulative totals for water and energy consumption and solid waste and wastewater generation for cumulative San Francisco development are listed below by their Office of Environmental Review EIR file number and name:

EE 74.71	State Compensation Insurance Building (Ninth and Market Sts.)
EE 74.128	Bank of America Data Center (Eleventh and Market Sts.)
EE 74.140	Howard and Main Sts. (northeast corner)
EE 74.170	Bank of Tokyo of California (California First Bank)
EE 74.224	333 Market St.
EE 74.253	444 Market St.
EE 74.322	595 Market St.
EE 75.60	505 Sansome St.
EE 76.162	180 Montgomery St.
EE 76.263	Golden Gateway Center Phase III
EE 77.98	333 Market St. Addendum
EE 77.220	Yerba Buena Center (Convention Center only)
EE 78.27	101 California St.
EE 78.61	Pacific Gateway
EE 78.207	Federal Reserve Bank (Market and Main Sts.)
EE 78.298	Crocker National Bank (Kearny and Post Sts.)
EE 78.334	One Sansome St.
EE 78.413	150 Spear St.
EE 79.178	456 Montgomery St. DEIR
EE 79.57	Daon Building

XI. SUMMARY OF COMMENTS AND RESPONSES

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XI. Summary of Comments and Responses

LIST OF COMMENTERS

Mr. Toby Rosenblatt, President City Planning Commission	Ms. Sally Binford Gray Panthers of San Francisco
Ms. Susan Bierman, Member City Planning Commission	Ms. Susan Kerr California Archaeological Site Survey Regional Office Central Coast Counties
Ms. Ina Dearman, Member City Planning Commission	
Dr. Yoshio Nakashima, Member City Planning Commission	Minutes of The Landmarks Preservation Advisory Board, 5 March 1980
Mr. Charles Starbuck, Member City Planning Commission	Mr. T. R. Lammers, District 4 Director CALTRANS
Mr. Robert Passmore, City Zoning Administrator	Mr. Charles Q. Forester, Director of Planning Association of Bay Area Governments
Mr. Carl Imparato San Franciscans for Reasonable Growth	Mr. David Jones 239 Bartlett St. San Francisco, CA 94110
Mr. John Elberling San Francisco Tomorrow	Mr. Tony Kilroy 473 11th Avenue San Francisco, CA 94118
Mr. Christopher Curry, Board of Directors San Francisco Tomorrow	Ms. Susan Parker 5408 College Avenue, Oakland, CA
Mr. Robert Berner, Executive Director The Foundation for San Francisco's Architectural Heritage	Mr. John Barry 1619 10th Avenue, San Francisco, CA 94122
	Mr. Don Zeigler 1543 Lake St., San Francisco, CA 94118

SUMMARY

Comment:

Mr. Toby Rosenblatt, President, City Planning Commission

"The summary, I think, should include some statements with respect to the cumulative impacts, particularly with respect to the more significant ones that are identified in the body of the report with respect to parking and traffic and air quality."

Response: On p. 3 of the Draft EIR, a paragraph has been inserted after the first paragraph as follows:

"The project would contribute incrementally to the impacts of development now under construction and proposed in the Downtown business district. These cumulative impacts include increased demands for water and sewer services, solid-waste disposal, energy and police and fire protection; increased vehicle and pedestrian traffic, parking demand and transit ridership; and impacts on regional air quality. The project could contribute to a short-term cumulative oversupply of office space in the 1980s."

PROJECT DESCRIPTION

Comment:

Mr. Toby Rosenblatt, President, City Planning Commission

"On the design aspects, there is no description and there should be, I think on ... the rationale for the Sacramento St. setback and some rendering or discussion of what that looks like, particularly around the core."

Response: The Sacramento St. setback was incorporated in the building design in part to satisfy the F.A.R. limitation of 14 to 1, plus the corner bonus, allowable in this location in the C-3-0 District. The rectangular shape of the setback resulted from eliminating floor space at the upper levels (floors 2 through 24) adjacent to the elevator and utility core. The location of the setback along the eastern property line also provides a transition from the proposed project to the adjacent low-rise buildings to the east. The blank north-facing wall along the elevator core would not have windows, but would have exterior detail similar to the floor and window lines; the east-facing wall would have windows on office floors. The setback would be landscaped with small evergreen trees in planters. See Figure 2a, p. 7a, for a rendering showing the Sacramento St. setback.

XI. Summary of Comments and Responses

Comment:

Mr. Toby Rosenblatt, President, City Planning Commission

"The setbacks which are indicated to be landscaped are described, in the body of the report, as having vines and seasonal flowers. The rendering would suggest that the plantings, the landscaping, are trees, of perhaps as much as a full story in height. There needs to be some clarification as to what it will be and resolution as to what will be there."

Response: The discrepancy between the written description of setback landscaping and the rendering has been clarified by the project sponsor and architect. The last sentence of the first paragraph on p. 6 of the Draft EIR has been changed to read: "Planters with small evergreen trees and shrubs, appropriate to the exposed location, would be placed on each setback."

LAND USE, ZONING AND URBAN DESIGN

LAND USE AND ZONING

Comment:

Mr. Charles Starbuck, Member, City Planning Commission

"On pages 50 and 51, (in the) discussion of Floor Area Ratio and also corner bonus, I think it would be helpful if we could include in the EIR the urban design rationale for this corner bonus which is (a) 20% increase in floor area."

Response: The corner bonus was included in the basic FAR standards in the zoning ordinance (City Planning Code) which was adopted in 1960 to replace the ordinance adopted in 1921. The rationale at that time was that buildings facing on 2 streets, with the greater open space available at a corner, could have a greater floor area than interior lots, without detriment to the immediate environment or to the building occupants. When the Code was amended in 1968 to incorporate 10 different bonuses for Downtown development, the corner lot bonus was retained as 1 of the 10.

Comment:

Minutes of The Landmarks Preservation Advisory Board, 5 March 1980

"On page 18, (The Board) would like to see a photo of both the Sacramento and Halleck St. elevations of 240-248 (Battery St.)."

Response: Photograph A of Figure 11 on p. 18 of the Draft EIR has been revised to show the Sacramento St. facade of 240-248 Battery St.

XI. Summary of Comments and Responses

The Halleck St. facade of this building (335-337 Sacramento St.) is partially visible in Photograph B of Figure 11. As shown in the photograph, the brick changes at the vent pipe to less expensive brick. The windows on the lower floor have been covered with concrete.

ARCHITECTURAL RESOURCES

Comment:

Mr. John Elberling, San Francisco Tomorrow

"The basic concept of this project is total site clearance. It's located in a block, and if you take a look on your map on page 44 you can see the whole block, that is one of the remaining blocks in downtown San Francisco that is predominantly low-scale structures. It also is a block that among those low-scale structures has many of notable architectural merits, and as a whole, with a few exceptions, it's very good urban design. It's in a crucial location. And this is not noted at all in the EIR."

Response: On p. 17 the Draft EIR states that "The block is presently occupied by older, pre-1950 office buildings, with ground floor retail uses, ranging from 2 to 11 stories." Existing land uses are shown in Figure 12, p. 20 of the Draft EIR. Figure 11a has been added on p. 19a showing the heights of the buildings on the project block and vicinity. Figure 15, on p. 24 of the Draft EIR, shows the Heritage ratings and the 1976 Department of City Planning Architectural Inventory Rating of all buildings in the block.

The Heritage Inventory rates the building at the southwest corner of Sacramento and Front Sts. as "B", while the 1976 Department of City Planning Architectural Inventory Rating of this building is "2". The other 4 buildings east of the site on the remainder of the block are rated "C" by the Heritage Inventory; the 1976 Department of City Planning Architectural Inventory Rating includes two of these buildings, both rated "0" as shown in Figure 15 on p. 24 of the Draft EIR. The rating of "0" is the lowest in the Department of City Planning Inventory scale of "0" to "5". Also shown in Figure 15, p. 24 of the Draft EIR, are 2 buildings on the California St. frontage of the block which are rated "A" (including the Newhall Building) and 2 buildings rated "B" by the Heritage Inventory. Three of the four Heritage rated buildings are also rated in the 1976 Department of City Planning Architectural Inventory. The Newhall Bldg., on the corner of Battery and California Sts., is rated "4" and the 2 adjacent structures are rated "3" in the Department of City Planning Inventory.

Buildings rated "C" by Heritage are considered to be "resources which have some merit and strength of identity (which) may be considered background buildings. They are important elements of the urban fabric which support the character and setting of more significant resources." "D" buildings, like 248 Battery St. (identified on p. 25 of the Draft EIR), are considered "buildings of no particular cultural or design merit with little historical significance."

XI. Summary of Comments and Responses

Whether the project impact is "crucial" is a "value judgment dependent upon the reader's frame of reference" according to ER8, The Format and Guidelines for Preparing an Environmental Impact Report (San Francisco Department of City Planning, April 1979). ER8 specifies that "no judgments are to be made (in the EIR) as to the magnitude of significance of impacts; the data should speak for themselves."

Comment:

Mr. Robert Berner, San Francisco's Architectural Heritage

"pp. 23-25. Architectural Resources. Only the buildings on the site are considered. Some consideration should be given of the adjacent Newhall Building at 260 California Street (Lewis Hobart, 1910, 1917) rated "A" in Splendid Survivors. It is unquestionably one of the finest office buildings left downtown and will clearly be affected by the project."

Response: Although not specifically mentioned in the text, the "A" rating of the Newhall Bldg. (Fidelity Savings and Loan Association) is shown in Figure 15 on p. 24 of the Draft EIR. A photograph of the building (see Figure 22, p. 55 of the Draft EIR) where the building is referred to by its ground-floor tenant, the Fidelity Savings and Loan Association, shows the visual relationship between the proposed project and the Newhall Bldg. The Newhall Bldg. is not adjacent to the site as stated by the commenter, but is 1 lot to the south as shown in Figure 15; the Wall St. Journal Bldg. is immediately south of Halleck St. from the project site. A more complete description has been added on p. 25 of the Draft EIR (at the end of section) as follows: "The Newhall Bldg., at the northeast corner of California and Battery Sts. was designed by Lewis Hobart in 1910 and was expanded in 1917. Rated "A" by Heritage, it is described by Heritage as 'an extremely important element on California St.'"

Comment:

Minutes of The Landmarks Preservation Advisory Board, 5 March 1980

"On page 25, first paragraph, the sentence beginning "The original..." is an awkward sentence. In the second paragraph, photos are needed of the "D"-rated building."

Response: The phrase "has remained intact" has been changed to read "has not been changed". Two photographs of 240-248 Battery St. (335-337 Sacramento St.), the "D"-rated building, are included in Figure 11, p. 18 of the Draft EIR.

URBAN DESIGN POLICIES

Comment:

Mr. Robert Berner, San Francisco's Architectural Heritage

"pp. 52-53. Table 9: Relationship between Applicable Urban Design Policies of the San Francisco Comprehensive Plan and the Proposed Project. The Newhall Building is again ignored, specifically in A.2, B.4, C.6, C.7 and C.8, policies which primarily stress harmonious relationships between the new project and surroundings. The project admittedly violates B.4 ('Respect the character of older development...'). The response to B.5 ('Recognize and protect outstanding and unique areas that contribute in an extraordinary degree to San Francisco's visual form and character') seems to be sophistry. 'The project area is part of the Financial District, an area whose visual form is characterized by highrise buildings,' i.e., it doesn't address the clear intent of the Urban Design Policy; San Francisco's unique visual form and character were not created by highrises. The project admittedly is in substantial violation of C.6 which seeks to promote visual harmony.

"The response to D.10 ('Improve pedestrian areas by providing human scale and interest') seems inadequate, because it makes no reference to the scale of the buildings already on the site. Despite the provision of a diagonal crosswalk, the scale of the project is unquestionably inhumane in comparison to the existing scale."

Response: On p. 52 of the Draft EIR the following has been added to the end of A.2: "and the medium-rise buildings on California St., particularly the Newhall Bldg. (Fidelity Savings and Loan Association) at Battery St. (see Figure 22, p. 55)." In B.4 ("Respect the character of older development") it is stated that "Because of its height, it would be different in scale and design (underlining added) from nearby... buildings." Concerning B.5, it is implicit that the medium-and high-rise buildings of the Financial District contribute to the dominant visual form and character of the District. The buildings within the remainder of the project block are more fully described in the first two Responses under Architectural Resources, pp. 173 and 174. Other low-rise buildings are described elsewhere in text and photos (see pp. 17, 18, 19, 53, 57, 58, and 59 of the Draft EIR). Conservation Policy No. 7 of the Urban Design Plan does not "clearly" address height limitations. The map "Urban Design Guidelines Comprehensive Plan," adopted in 1971 by Resolution No. 6745 of the City Planning Commission, shows the site in a "No Limit: Height Determined by Floor Area Ratio" category which subsequently was made precise in 1979 by amendments to the Planning Code adopting Height and Bulk districts. The analysis of the project in relation to Policy 13 of the Urban Design Plan concerning Neighborhood Environment describes the project, as intended, and not the existing site conditions. Conclusions expressed in the comment above are those of the reader. The EIR has provided a factual basis for each reader to form conclusions according to his or her particular bias or frame of reference.

XI. Summary of Comments and Responses

Comment:

Minutes of The Landmarks Preservation Advisory Board, 5 March 1980

"On page 52, Number 5, Policy 7, the response does not address the point. (The Board) felt that the Report overemphasizes newer high rises in the area and ignored the low-rise buildings there."

Response: See Response to Mr. Berner's comment above.

Comment:

Minutes of The Landmarks Preservation Advisory Board, 5 March 1980

"On page 53, Number 6, older buildings were not discussed at all regarding height, materials, proximity. Number 7, the response is not to the point. Number 9, the 'vara' term of measurement needs explanation."

Response: The buildings in the vicinity of the project, both old and new, are described on pp. 17 and 19 of the Draft EIR in terms of height and proximity (see also Figure 11a p. 19a). Materials of older buildings are briefly described on p. 53 in C. 6. The response to No. 7 on p. 53 of the Draft EIR addresses the policy concerning contrasts in shape by pointing out that the upper-level setbacks of the proposed project would result in a distinctive appearance. Judgment as to the results of the described relationship of the project to applicable policies is left to the reader, on the basis of the facts presented, in accordance with ER8, "The Format and Guidelines for Preparing an Environmental Impact Report."

The vara is simply defined in C. 9, p. 53 of the Draft EIR. It is a Spanish unit of measurement applied to the early portions of San Francisco and has continued to be used in describing land parcels in San Francisco since California became a state of the United States. A single vara is equivalent to 2.75 ft.

PEDESTRIAN WAY

Comment:

Mr. John Elberling, San Francisco Tomorrow

"... problems on the ground floor. They have this pedestrian cut-through at a diagonal on that corner, presumably to help pedestrian flow. In fact, it doesn't do that at all. What it will do is induce people coming out of One Embarcadero Center to jaywalk across the middle of the block to Sacramento Street so they can take diagonal shortcut to get up to Battery Street. What you are creating is a jaywalking problem by the diagonal cut-through."

XI. Summary of Comments and Responses

Response: The potential for jaywalking exists in any circumstance where building entrances or other pedestrian attractions occur on opposite sides of the street. The open pedestrian way on the ground floor of the proposed building provides access to retail space and the building's lobby without multiple entrances directly on Sacramento and Battery Sts. Pedestrian through-traffic in this corridor may be discouraged by a visual barrier, such as a kiosk, sculpture or planter. Pedestrian crossing of Sacramento St. may be discouraged by a curb-side banister or landscape plantings. The Sacramento St. corner crosswalk is approximately 120 ft. west of the entrance/exit of the pedestrian way. The City is planning to install a traffic signal at the intersection of Front and Sacramento Sts. With the proposed signal in operation, pedestrians will have a protected crossing at both ends of the block on Sacramento St. between Front and Battery Sts. Present traffic volumes on Sacramento St. are sufficient to restrict the amount of jaywalking that may be induced by the pedestrian way in the project. Any jaywalking that might be induced by the project would be primarily caused by a similar midblock pedestrian walkway extant in One Embarcadero Center. As an alternative, pedestrian access between the proposed building and One Embarcadero Center could be channeled and controlled by a mid-block crosswalk, with signalization, across relatively narrow Sacramento St. The project sponsor would be willing to install a door across the pedestrian way on Sacramento St.

Comment:

Mr. Toby Rosenblatt, President, City Planning Commission

"There should be some discussion of the micro-climate or environment of that passageway... I don't believe there is any discussion of what the wind effects will be or the light effects will be; and that comes to mind because I think where there have been efforts such as in the Embarcadero Center to do that interior space retail.... My experience is it is a very uncomfortable environment, excessive wind, dark, low feeling, not the kind of thing that I think we have been encouraging in terms of pedestrian-interest retail."

Response: The pedestrian way from Battery St. to Sacramento St. would be approximately 20 ft. wide by 16 to 20 ft. high; this is equivalent to 1-1/2 to 2 stories. The final design of the passageway is not complete. In the opinion of the meteorological consultant, northwest wind conditions would not generate air currents in the passageway. During westerly winds, however, a wind pressure effect may be created through the passageway, causing drafts. This effect would be reduced or eliminated by inclusion of revolving doors at one or both entrances to the passageway (Donald Ballanti, consulting meteorologist, telephone communication, 5 May 1980).

Retail shop windows would flank the pedestrian way on both sides. According to the project architect, the retail uses along the passageway would be brightly lit, and the entrances and retail space at the corner of Battery and Sacramento Sts. would admit daylight into the passageway (P. Dangerfield, Architect, Skidmore, Owings and Merrill, telephone communication, 2 May 1980).

XI. Summary of Comments and Responses

PROJECT VISIBILITY

Comment:

Minutes of The Landmarks Preservation Advisory Board, 5 March 1980

"On page 55, other buildings in the area, particularly the buildings across the street, and the building next to it in the photo have not been described. The Daon building has been related only to the buildings to the north and Embarcadero Two."

Response: The proposed Daon Bldg. has been related to nearby buildings. For example, on p. 52 of the Draft EIR, A.2, Policy 3, reference is made to "buildings of similar height and bulk at 601 Montgomery St., 505 Sansome St., 425 California St., and 350 California St. ... and... the 2- and 3-story buildings to the east."

The Newhall Bldg. (Fidelity Savings and Loan Association) at the northwest corner of California and Battery Sts. is more fully described in the second Response under Architectural Resources, p. 173. A more complete description of existing building heights in the project vicinity has been added in Figure 12a, p. 19a of the Draft.

SHADOW EFFECTS

Comments:

Mr. Carl Imparato, San Franciscans for Reasonable Growth

"It states that the shadows that the building would cast would extend over the podium level of Two Embarcadero Center, which is very widely used. The shadows extend mid-day during the spring and fall. Wasn't it bad enough that 101 California which was approved last year is going to block the damn place? Now this building would."

Ms. Susan Bierman, Member, City Planning Commission

"I don't know what early afternoon means. It says early afternoon spring and fall. And the diagram has a noon shadowing. I think we need to look at those shadow pictures and see if there is a picture that relates to what this particular building's shadows are in excess of what (101 California St.) shadows were. To me, the Embarcadero podium level is a definite amenity to that part of the City.... Now, if this building is going to shadow it spring and fall, pretty soon there isn't going to be much point in having made that podium level."

Response: The photographs in Figures 23, 24, and 25, pp. 57-59 of the Draft EIR, show the shadow effects of the proposed project on surrounding streets and buildings in mid-March and mid-September, mid-December and mid-June at 8:00 a.m., 12:00 noon and 4:00 p.m., in accordance with the requirements of the Department of City Planning, Office of Environmental Review. These times of the day were selected for inclusion by the Office

XI. Summary of Comments and Responses

of Environmental Review because they generally represent the times when streets and plazas are most used by pedestrians arriving at and leaving work and at lunchtime. The proposed project would not shade the podium level of Two Embarcadero Center or any public plaza at these times of day at any season of the year.

During the photographing of the shadow studies for the EIR, it was observed that, although the proposed project would not shade any plazas or open space at the times of heaviest pedestrian use, it would shade the podium level of Two Embarcadero Center in the early afternoon in the spring and fall. This information was, therefore, included in the text of the Draft EIR on p. 56. For further clarification, the project would cast shadows on the podium level of Two Embarcadero Center from about 1:30 p.m. to 3:30 p.m. during mid-March and mid-September (solar time). One Embarcadero Center also shades the podium level of Two Embarcadero Center during these afternoons. The proposed project would not shade the podium level at the same time as 101 California St. which would cast shadows on the podium level at mid-day during the winter months. Shadow effects at 2:00 p.m., 2:30 p.m., and 3:00 p.m. are illustrated in Figure 25a, p. 59a. (The arrows in Figure 25a are referred to in the first Response under Initiative-Conforming Alternative, p. 230 of the Responses, and indicate the length of shadows from a 185 ft. building).

CULTURAL AND HISTORIC RESOURCES

Comment:

Ms. Susan Kerr, California Archaeological Site Survey

"... (California Archaeological Site Survey) considers the historic research to be insufficient. There are six National Register sites within a quarter of a mile from the Daon Building site."

Response: According to the San Francisco listings on the National Register, published in the Federal Register on 6 February 1979, there are 6 National Landmarks between 2 and 6 blocks of the site. The 5-story Customs House, a federal building at 550 Battery St. between Washington and Jackson Sts., which is on the National Register, is 2 full blocks north of the project site facing a 25-story apartment building in the Golden Gateway. It is in a C-2 (Community Business) zoning district and is at the southeast corner of a 65-ft. height limit district.

The 8-story Hallidie Bldg. at 130 Sutter St. is 5-1/2 blocks from the project site. It is in a C-3-0 (Downtown Office) zoning district and is in a 500-ft. height district. It is listed on the National Register and is also a designated San Francisco City landmark.

The Jackson Square Historic District is in a 65-ft. height district and a C-2 Community Business zoning district. It is bounded by Sansome, Washington, Columbus, Kearny, and Pacific Sts.; its southeast corner is 3

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blocks from the project site and its northwestern corner is 6 blocks from the project site. As a district, it is a noted site on the National Register and several buildings within Jackson Square are designated San Francisco landmarks.

The 9-story Bank of Italy (now Bank of America) Building at 552 Montgomery St. is 2.5 blocks from the project site. Built in 1908, it is a Renaissance-Baroque styled building by Shea and Lofquist, winners of a design competition. It is in the C-3-0 (Downtown Office) zoning district and in a 400-ft. height district. It is listed on the National Register of Historic Places.

The Mills Building at 220 Montgomery St. is 5.5 blocks from the project site. Designed in 1891 by the Chicago firm of Burnham and Root, it was rebuilt in 1908 and expanded in 1914, 1918 and 1931. One of the oldest buildings in Downtown San Francisco, its 10 stories made it one of the tallest when it was built. It is in the C-3-0 (Downtown Office) zoning district and in a 500-ft. height district. It is listed in the National Register and is a designated City landmark.

The International Hotel at 848 Kearny St., 6 blocks from the project site is listed on the National Register. Situated at the southeast corner of Jackson and Kearny Sts., the 3-story structure has been removed since being listed. The site, now vacant, it in a C-2 (Community Business) zoning district and a 65-ft. height district.

The extensive historic work performed on Levi's Plaza, for example, which included controlled borings at the known sites of buried ships, was undertaken by the project sponsor because of the general knowledge of historic ships on the site, the capability of rehabilitating and retaining some old buildings as a part of the project, and the existence of open ground on which boring could be carried out. The Daon site, in contrast, is fully covered by buildings and is not known to contain any historic ships or artifacts. The last Mitigation Measure on p. 107 of the Draft EIR contains the basic required actions to be taken if historic artifacts are found during excavation and preparation of the site for construction.

Comment:

Minutes of The Landmarks Preservation Advisory Board, 5 March 1980

"On page 61, the name San Francisco Maritime Museum should be changed to "National Maritime Museum".

Response: The word "National" has been inserted before "Maritime Museum of San Francisco" on p. 61 of the Draft EIR.

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Comment:

Minutes of The Landmarks Preservation Advisory Board, 5 March 1980

"On pages 25-26, the Report should add that there was a pier called Howison's Pier on the line of Sacramento Street, which was filled in by 1851. Unlike the Long Wharf and the California Street Wharf, the pier was not extended, so that it was filled in very early, and there is the possibility that there are artifacts close by. (The Board) would also like to add the standard statement used by the National Maritime Museum when using the map on page 26 to the effect that the map is to be used to suggest areas, and not with any degree of accuracy."

Response: An insert on p. 25 of the Draft EIR has been made as follows after the sentence pertaining to the California St. Wharf: "According to a member of the Landmarks Preservation Advisory Board, Howison's Pier on the line of Sacramento St. was filled by 1851." A sentence has been added at the end of the first paragraph on p. 26 of the Draft EIR as follows: "The data on the map are qualified as shown in the legend of the map. The map is the best guide, however, to the probability of ships being at the locations shown (Harlan Soeten, Curator, National Maritime Museum of San Francisco, personal communication, 27 February 1979)."

THE ASSOCIATION OF BAY AREA GOVERNMENTS' DRAFT PROJECTIONS 79 FIGURES

Comments:

Mr. Carl Imparato, San Franciscans for Reasonable Growth

"... it's appalling and I think it is deceptive and fraudulent that this EIR is still not using the figures (from ABAG's Draft Projections 1979) for the primary analysis. There is an analysis which is based on the ABAG projections and it is put in the Appendix at the back of EIR. But for the main body of the text the impacts analysis is based on the irrelevant fact that some 67% of the employees of San Francisco Federal Savings and Loan are City residents. "In any case, the other 80% of the occupants, even had the Savings and Loan been the primary tenant, the other 80% of the occupants are unknown and the ABAG figures would at least have to be used for those 80% of the people working in the building. So it doesn't take a Ph.D. in math to see that even if one was going to do a weighted average of the San Francisco Federal employees' data for their share of the building, 20%, and the ABAG data for other 80% of the occupants the composite would still be only about 21% of the building's occupants would be residents and not the 67% that's used in the text in the draft EIR.... So in that context, the fact that 20% of the buildings' occupants are going to be San Francisco Federal employees is sort of meaningless. Because when San Francisco Federal moves into this building it is going to leave spaces in the other buildings. We don't know who is going to take the space in those other buildings. So the bottom line is there will be 950 new office workers in the City of San Francisco. We don't know anything about them and the only thing we can say about them, what ABAG says about them, on the average if 950 new office jobs are created on the City only 10% or 95 of these people who would be working in these buildings would be

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expected to be City residents. So the only honest way to look at the job impacts, the income multiplier effects, parking impacts, is to use (the) ABAG figure of 10%."

Mr. Toby Rosenblatt, President, City Planning Commission

"Then on page 168, with respect to the whole discussion of the ABAG numbers versus the survey, what I call the survey numbers of existing situations, we did a rather more extensive discussion in that in the last draft EIR with respect (to) I believe it was, 456 Montgomery, which talks in much greater detail about alternative numbers to the ABAG numbers - why those may or may not be more appropriate to use. If you remove the San Francisco Federal data, which you have to do now, or even if you didn't do that, I think this Appendix ought to be reviewed against all the work that was done in that prior EIR, which was more, much more extensive."

Response: Data from the Draft Projections 79 were described in Appendix I on p. 168 of the Draft EIR. The Association of Bay Area Governments (ABAG) released the Final Projections 79 in early May 1980. The revised final ABAG publication does not include projections for the category of "Employed Residents"; this is a result of ABAG's decision to review the derivation and use of these figures. Since figures for employed residents have been deleted from the Final Projections 79, they are no longer available for use in the analysis of the number of San Francisco residents who would be employed as a result of the proposed project or cumulative office development in San Francisco, and the number of persons who would commute to work from outside of San Francisco. Therefore, Appendix I, pp. 168-173 of the Draft EIR has been deleted from the Final EIR, as has all information referring to, or derived from, the Draft Projections 79 "Employed Residents" figures.

ABAG has been aware of the controversy surrounding use of their regional forecasts to analyze specific, local impacts. In Appendix A of the Draft Projections 79 (quoted on p. 168 of the Draft EIR), ABAG cautioned: "As projections are extended further into the future, the possibility of divergence from known trends and current policies is greater. As the projections are applied at a smaller and smaller geographic scale, they become less reliable representations of localized conditions." In addition, use of the ABAG Projections 79 material as the basis for the transportation analysis would not be justified as no information about main home-to-work travel modes or travel corridors is contained in the final report. The projections are based county-wide for the 4 Standard Metro- politan Statistical Areas (SMSA) in the Bay Area. No breakdown by area smaller than a county is made. Thus, applying the projection for the entire City and County of San Francisco to projects only in the Downtown area would not be valid. In order to establish more accurate figures for employed residents, ABAG, in conjunction with the Metropolitan Transportation Commission (MTC), is planning to undertake studies of existing patterns of commuting, residency and employment in the Bay Area (R. Carlson, Association of Bay Area Governments, telephone communications, 22 April and 5 May 1980).

All references to ABAG Draft Projections 79 figures in the Draft EIR have been revised or deleted as follows:

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<u>Page in</u> <u>Draft EIR</u>	<u>Change in</u> <u>Section Containing Reference or Data</u>	<u>Final EIR</u>
66	IV. ENVIRONMENTAL IMPACT E. Economic Aspects and Relocation -Secondary Income Effects-----	Delete reference to percentage of employed residents; revise figures on population & jobs.
76	F. Transportation and Parking -Project Travel Demand-----	Delete reference to Appendix I.
82	F. -Cumulative Traffic Impacts-----	Delete reference to alternative method of analysis based on ABAG figures.
88	F. -Cumulative Transit Impacts-----	Delete reference to analysis using the ABAG figures.
104	K. Growth Inducement-----	Delete reference to housing impact from ABAG figures.
105	K. -NOTES-----	Delete reference to ABAG data in NOTE 3
168-173	APPENDIX I: Use and Interpretation of ABAG <u>Draft Projections</u> 79----	Delete Appendix I.

Comments:

Mr. Carl Imparato, San Franciscans for Reasonable Growth

"According to the EIR, this project alone will increase the demand for parking downtown by 630 spaces. So that's bad enough. But if you look at the cumulative parking impacts... projected off-street demand in 1981, next year, will be for 12,000 more spaces (using the ABAG data)....The travel impacts table on page 76, it's based on San Francisco Federal Savings employment data... should be redone using the ABAG data..."

Ms. Ina Dearman, Member, City Planning Commission

"And don't you think you need to add more in the section when you talk about the projected need for car spaces at 12,000 cars (using the ABAG data). Where are they going to go, where will they be parked? I mean just to say it, I am glad to have the information because I know it belongs in the EIR..."

Mr. Don Zeigler

"Now, this Daon Environmental Impact Report (on page 173) mentions a parking deficit of 12,060 spaces (using the ABAG data). But what will the impact of this deficit be on the Richmond, Pacific Heights, the Sunset, etc.? I would like you to indicate where the 12,060 extra vehicles will park. How many in

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each neighborhood? And at the present growth rate, how many more vehicles will there be by 1990 and 2000? And where will they park?"

Response. As the residency patterns used in the ABAG Draft Projections 79 are based on questionable data, as discussed in the preceding Response, the conditions described would most likely not occur. If the future travel demand occurs as projected in the ABAG analysis, the parking deficit would most likely not develop as the external and internal street system would not be able to handle the volume of vehicles that would cause the parking deficit projected. A major shift in modes would probably occur, especially if parking were not available any closer than the outlying transit terminals, e.g., if parking were available no closer than the S.P. Depot, Peninsula commuters may be more inclined to take the train than drive. The parking "deficit" is for the predefined study area only. Parking outside of the study areas has not been included in the analysis. Thus, the deficit shown is essentially an artificial condition caused by the method of analysis.

Since San Francisco Federal Savings and Loan Association would no longer be the prime building tenant, the Transportation, Circulation and Parking sections (IV.F, pp. 74-89, and V., pp. 109-112) of the Draft EIR have been revised to exclude data derived from their employees' residency patterns (see the summary of revisions and deletions to San Francisco Federal Savings and Loan data, p. 185 of the Responses). The project-generated parking demand in the revised analysis is projected to be about 420 spaces. The parking deficit from cumulative office building development is projected to be 7020 spaces (see the Responses under Parking Impacts, pp. 190-193).

SAN FRANCISCO FEDERAL SAVINGS AND LOAN DATA

Comments:

Ms. Susan Bierman, Member, City Planning Commission

"I would think that the EIR needs to be updated since the Savings and Loan is out... So I would think you would need to update it and think about maybe a little more information about commercial use on the ground floor. And maybe it's covered enough in here, but I would think you need a little more."

Mr. Toby Rosenblatt, President, City Planning Commission

"The change in major tenant from a savings and loan, I think, would raise the question in my mind as to whether that changes the program with respect to the ground floor design. If you no longer have an anchor tenant with a name on the building who wants to occupy that front space, it may not be so necessary to occupy that front space with a financial institution, which has been considered by this Commission and this Department to be dead space from a pedestrian-interest point of view."

Response: Since the withdrawal of the financial institution as a primary tenant the project sponsors have given serious consideration to the type

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and mix of retail uses on the ground floor. No financial institution or discount merchandiser would be accepted by the project sponsors on the ground floor (J. Markey, Senior Projects Manager, Daon Corporation, telephone communication, 6 May 1980). Figure 7, p. 12 of the Draft EIR, has been revised to show additional ground-floor retail space. Due to the high visibility of the retail areas, uses which rely on location, pedestrian volume, and exposure are anticipated. Such potential retailers include men's and women's fashions, haberdashery, jewelry, quality bookstore or cardshop, and retail florist. In addition, a restaurant would be a desirable ground-floor tenant. Two of the tenants presently on the site (men's clothing and a restaurant) have expressed an interest in leasing space in the proposed building. According to Mr. Markey, the project sponsor would establish storefront and sign criteria that would require design cooperation from the retail merchants. These criteria would encourage such features as articulation of storefronts with bay windows and creative signing (to avoid a "tunnel effect") and the blending of glass and solid materials to avoid continuous walls of floor-to-ceiling glass.

Comment:

Mr. Charles Forester, Director of Planning, ABAG

"The Draft EIR states that because the major tenant of this building (San Francisco Federal Savings and Loan Association) is already located in San Francisco, few new jobs would result from the proposed project... however, the project will mean a net gain of office space as San Francisco Federal vacates its old offices, thus leaving a net gain in city employees."

Response: San Francisco Federal Savings and Loan Association has withdrawn as the major tenant and the Draft EIR has been revised to reflect this (see the above Responses). The Draft EIR does not state that few new jobs would result from the proposed project. On p. 103 of the Draft EIR, it states that since the former primary tenant (San Francisco Federal) was already located in San Francisco "few new jobs at the Savings and Loan would be considered to result from the proposed project" (underlining added). The total projected permanent employment at the project site is described on p. 65 of the Draft EIR. Table 10, p. 65 of the Draft EIR, has been revised to reflect the change in ground floor use (see the Response under Businesses and Employment Displaced from the Site, p. 196). Revised Table 10 figures show approximately 1,215 total permanent jobs (5 fewer than in the Draft EIR) in comparison to approximately 220 existing jobs at the project site. (See the discussion under the following comment.) The project would result in a net gain of employees and office space as described on pp. 65 and 70-71 of the Draft EIR.

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Comment:

Mr. Carl Imperato, San Franciscans for Reasonable Growth

"First of all, it is ridiculous to use San Francisco Federal Savings and Loan employee residence data to describe the project's expected employment effects. Because only 1/5 of the building would have been occupied by a savings and loan. Now that they are out of the picture, it's totally useless to use their data. We claim that because the EIR is really concerned with the impacts of this project on all of San Francisco, one shouldn't be using the San Francisco Federal figures at all. Because we are concerned with the whole City."

Response: Since San Francisco Federal Savings and Loan Association would no longer be the principal building tenant, all references to San Francisco Federal Savings and Loan contained in the Draft EIR have been deleted. A summary of the revisions and deletions is given below:

<u>Page in Draft EIR</u>	<u>Section Containing Reference or Data</u>	<u>Change in Final EIR</u>
1	I. SUMMARY-----	Delete reference to principal tenant.
4	II. PROJECT DESCRIPTION Objectives of the Proposed Project-----	Delete data on area to be occupied by S.F. Federal S & L.
6	Site and Building Plan-----	Delete reference to main savings office.
51	IV. ENVIRONMENTAL IMPACT B. Project Visibility-----	Delete reference to main savings office.
61	D. Community Services and Utilities -Police-----	Delete reference to security system for S.F. Federal S & L.
64	E. Economic Aspects and Relocation -Office and Retail Space-----	Delete reference to commercial banking space area.
65	E. -Permanent Employment-----	Revise Table 10; delete reference to S.F. Federal S & L employment.
65	E. -Secondary Income Effects-----	Delete data on secondary income derived from S.F. Federal employees.
68	E. -Assessed Valuation-----	Delete reference to first occupancy by S.F. Federal S & L.
72	E. -Downtown Office Space-----	Delete reference to space vacated by S.F. Federal S & L.

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<u>Page in Draft EIR</u>	<u>Change in Section Containing Reference or Data</u>	<u>Final EIR</u>
75	F. Transportation, Circulation and Parking -Project Travel Demand-----	Delete reference to financial institu- tion space; See re- vised section IV.F.
76	Table 11-----	Delete reference to bank use, bank em- ployees, and savings office in footnote; See revised Table 11.
79	F. -Parking Impacts-----	Delete reference to staggered working hours; See revised section IV.F.
88-89	F. NOTES-Transportation and Parking	Delete source of residency data.
103	K. Growth Inducement-----	Delete reference to space vacated by S.F. Federal and growth in new jobs.
107 V.	MITIGATION MEASURES PROPOSED	
	Table 22 -Urban Design Measures Rejected-----	Delete reference to location of savings office.
108	Table 22 -Security Measures to be Included in the Project-----	Delete reference to S.F. Federal S & L security system.
109	Table 22 -Transportation, Circulation, and Parking Measures to be Included in the Project-----	Delete reference to flextime and car- pooling by S.F. Federal S&L.
117	VIII. ALTERNATIVES TO PROPOSED PROJECT	
	A. No Project-----	Delete reference to space and operational needs of S.F. Federal S&L.
120	B. Rectangular Tower- Variant with Second Floor Savings Office-----	Delete variant.
121	B. Source of Information on Alternative B-----	Delete.
168-173	Appendix I: Use and Interpretation of ABAG's <u>Draft Projections 79</u> -----	Delete Appendix.

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As the only identified tenant for the project is no longer projected to occupy the building, the travel distribution and assignment percentages used in the transportation analysis have been deemed invalid. The transportation analysis has been revised, based upon new travel assignment and distribution percentages.

The residency distribution used in the revised transportation section is an average of 4 employee surveys from nearby buildings (Levi Strauss, Crocker National Bank, Federal Reserve Bank and Itel) and 2 modelling analyses (456 Montgomery EIR, EE79.178 and MTC SCVCE, 1975.) The residency distribution for work travel from all of these sources were averaged to give the residency pattern used (shown in Table F-3, p. 160).

The Transportation, Circulation and Parking Impact section (IV.F, pp. 74-89) and some portions of Appendix F: Traffic, Transit, and Parking (pp. 160-163) have been revised in light of these new assumptions.

TRANSPORTATION, CIRCULATION AND PARKING

TRAFFIC AND TRANSIT TABLES

Comments:

Ms. Ina Dearman, Member, City Planning Commission

"And I don't know where the page is that talks about the number of cars and the level of service. Is that page 36... Yes... this chart goes on to say that this is Level of Service E, which doesn't mean it's free flowing. It's stopping and going. Wouldn't a more honest way to report it be to say it's going to be impossible if you add this expected increased number of cars that this proposed project would bring to the site?"

Response: The data shown in Table 5 on p. 36 of the Draft EIR are volume to capacity ratios (a form generally accepted by traffic and transportation engineers). The existing vehicle volumes are related to the capacity of the intersections (as defined at Level of Service E) in the form of a ratio or percentage. The volume to capacity ratios or v/c ratios may be related to descriptions of Level of Service through the use of Table F-1, p. 159 of the Draft EIR. As stated on p. 35 of the Draft EIR, "A capacity analysis shows the intersections of Battery St. at Washington St. and Clay St. at Front St. and the Mission St. intersections with Main and Beale Sts. to be operating at Level of Service C or better." Table 5 has been revised to use a new method of capacity analysis preferred by the Bureau of Traffic Engineering and to show the Level of Service of each intersection.

Ms. Susan Bierman, Member, City Planning Commission

"The table on page 84 and page 87, I had trouble with and I am not even going into it. If you think they are correct I will settle for that."

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Response: Tables 16 and 19, pp. 84 and 87 of the Draft EIR, have been revised to make the headings and footnotes more understandable, and supporting explanation has been inserted into the text. (See revised Tables 16 and 19, pp. 84 and 87.)

Ms. Ina Dearman, Member, City Planning Commission

"I had a horrible time reading the chart... that talks about the percentage of seated and standing capacity."

Response: Table 7, p. 41 of the Draft EIR, shows the existing transit conditions in terms of percentage of seated and total capacity occupied by the ridership. As most transit agencies carry loadings in excess of seated capacity on transit vehicles, the amount of available capacity occupied on the transit vehicles has been analyzed both in terms of percent of seated capacity occupied, and in terms of percent of total capacity (seated and standing) occupied, as not all of the agencies permit the same loadings of similar vehicles. The corresponding capacities on a per-vehicle basis are shown in the lower half of Table 7.

TRAFFIC IMPACTS

Comment:

Mr. Tony Kilroy

"Traffic congestion and confusion is already at a maximum during peak hours in the intersections of Main, Market, California and Drum Sts., and Beale, Market, Pine and Davis Sts. In addition, the intersections are a pedestrian hazard because of the bus and auto traffic and street relationships. The EIR should address and describe traffic at these intersections today and estimated accident statistics at these locations, (and state) who is going to pay to revise the traffic control systems needed to handle the traffic increase."

Response: Following is a supplemental analysis of traffic impacts at the intersections of Main, Market, California and Drumm Sts. and Beale, Market, Pine and Davis Sts. Volume-to-capacity ratios for each of the intersections for existing and projected conditions are shown below:

<u>Intersection</u>	<u>1979</u>	<u>1981 Base</u>	<u>1981 Base + Project</u>
Main/Market/Drumm/Calif.	0.84	0.86	0.88
Beale/Market/Davis/Pine	0.78	0.80	0.83

None of the projected conditions would be worse than Level of Service D (see Table F-1, p. 159 of the Draft EIR). According to the Bureau of Traffic Engineering, the accident history for the year 1979 indicates 3 accidents at the intersection of Main, Market, California, and Drumm Sts. and 2 accidents at the intersection of Beale, Market, Davis, and Pine St. The accident rates per-million-entering vehicles are 0.44 and 0.40, respectively. Accidents rates at both intersections are lower than the Citywide average accident rate for intersections of 1-way and 2-way streets of 0.53.

XI. Summary of Comments and Responses

In 1981, without the project, an estimated 0.2 million more vehicles per year would enter the Main, Market, California and Drumm Sts. intersection than in 1979, resulting in a statistical increase of 0.08 accidents per year. Project-generated traffic would add an estimated 0.09 million vehicles per year to the intersection, resulting in a statistical increase of 0.04 accidents per year. Without the project, an estimated 0.2 million more vehicles per year would enter the Beale, Market, Davis, and Pine Sts. intersection in 1981 than entered it in 1979, resulting in a statistical increase of 0.09 accidents per year. Project-generated traffic would add an estimated 0.09 million vehicles per year, resulting in a statistical increase of 0.04 accidents per year. Since the Levels of Service at the 2 intersections would not be below D, it is not anticipated that the traffic control systems would require modification.

Comment:

Mr. T.R. Lammers, District 4 Director, CALTRANS

"Project-generated traffic will add to the AM and PM peak period congestion on Routes 80, 101, 280, and 480; approaching and within San Francisco."

Response: The estimated percentage increases on Routes 80, 101, 280, and 480 would be less than 0.5% and, therefore, not statistically significant (see Note 8, p. 89). About 50% of the generated traffic assigned to the freeway system uses the Oakland-Bay Bridge (35% goes to the Peninsula, and 15% to Southeast and Southwest San Francisco). The total cumulative addition from 2 freeway access points (Beale and Clay Sts.) to p.m. peak-hour Oakland-Bay Bridge traffic would be about 1,270 vehicles. The ultimate effect of such an addition would be a spreading of the p.m. peak period bridge congestion over a longer period. The effect during the a.m. peak period would be to lengthen the westbound queues at the toll plaza and at the metering signals just west of the toll plaza. Project-generated traffic additions to the freeway system would be about 160 vehicles (80 vehicles on the Oakland-Bay Bridge) during peak hours.

PARKING IMPACTS

Comment:

Dr. Yoshio Nakishima, Member, City Planning Commission

"On page 77 you talk about 1970 DPW parking and traffic survey. It seems to me 10 years later it's no longer valid to use that kind of data and I'd like to know if the statistics you are using have proven out to be correct."

Response: The Downtown Parking and Traffic Survey (DPATS) completed in 1970 provided the basis for projecting incremental traffic increases developed from historical trends. It is the rate of expansion developed by DPATS that was used, not data from the survey. Since the rate of expansion in the period since 1970 has been determined in practice to be less than the historic trend between 1965-1970, the 1.8% annual expansion

XI. Summary of Comments and Responses

rate was used to represent the worst-case assumption for projecting traffic volumes for 1981 base levels. See the revised Transportation, Circulation and Parking section on pp. 74-89.

The revised Transportation, Circulation and Parking section uses an amended traffic growth rate of 1.0% per year. Mr. Scott Shoaf, of the Bureau of Traffic Engineering, has indicated that the DPATS growth rate of 1.8% per year was higher than current growth and that a lower rate would be more probable (see Note 1, p. 161 of Appendix F). He also indicated that the City does not currently have a data base available for projecting a new traffic growth rate. The rate of 1.0% per year was used in the revised Transportation, Circulation and Parking section at his suggestion (telephone communication, 30 April 1980).

Comment:

Dr. Yoshio Nakishima, Member, City Planning Commission

"Now, on page 79, there is discussion about that 630 parking (space) deficit is not a significant enough impact. I'd like to see somebody figure out what to do with 630 cars and tell me that's not significant.... Even though we do have a new transportation policy to discourage automobiles, to say it is an insignificant effect is kind of difficult to accept on my part."

Response: As shown in the revised Transportation, Circulation and Parking impact section (pp. 74-89), the project generated parking demand from the revised transportation section would be about 420 spaces. As no parking spaces would be provided by the project, the project parking deficit would be 420 spaces, i.e., all of the project parking demand would have to be met by parking facilities off-site. Surveys of available parking in the study area (see p. 36 of the Draft EIR) indicate that approximately 570 long-term parking spaces were available in the study area. The project-generated parking demand could be accommodated by parking available in the study area provided no major increase in parking demand occurs. Otherwise, parking available further away from the site would be used by the project parkers. In the event that parking were not available sufficiently close to the site, a shift in mode from autos to transit could occur, reducing the parking demand.

The Draft EIR does not refer to projected parking demand as not "significant". Impacts may not be designated as "significant" or "insignificant" according to ER8, the City's "Format and Guidelines for Preparing an Environmental Impact Report", April 1979; such judgments are reserved for the reader. It is stated on p. 85 of the Draft EIR that the project generated increase in the parking deficit over the cumulative parking deficit would not be a "statistically significant increase". As described on p. 89 of the Draft EIR in Note 7, "a change of less than 10% is statistically insignificant", because overall accuracy of the projections is less than 10%.

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Comment:

Mr. Carl Imparato, San Franciscans for Reasonable Growth

"How do you rectify the estimate (in the Daon EIR) that a building with 1200 employees would generate the demand for 630 parking spaces, with that in the 456 Montgomery Street EIR, which estimates that the increased employment of 440 would generate demand for only 104 spaces - less than half as many, per capita?"

Response: Analysis of the 456 Montgomery St. EIR indicates that a different ratio of work to non-work travel was used to project the parking impacts. In the 456 Montgomery St. EIR a higher percentage of non-work travel was assumed. As explained in the analysis on pp. 30 and 32 of the revised Transportation, Circulation and Parking section (IV.E), non-work parking demand can be assumed to be short term, thus allowing multiple use of the same parking space during a working day (i.e., this is what the turnover factor compensates for in the calculations). The modal split percentages used in the 456 Montgomery St. EIR assign a large percentage of the non-work trips to the walking mode, thus decreasing the assignment to the auto mode. The net effect is to generate a reduced long-term parking demand by assigning a larger portion of the overall travel generated by the building to walk trips rather than to auto trips and by assigning a larger portion of the auto travel as short term (non-work) rather than long term (work). In comparison with the revised Transportation section, the project parking demand per capita is approximately 1.6 times the 456 Montgomery St. EIR parking demand per capita, although the person-trip-ends in autos per capita for the 2 projects is essentially equivalent.

Comment:

Mr. T.R. Lammers, District 4 Director, CALTRANS

"Parking locations in the fringe areas will need to be found by the individual operators (cars, vans, etc.). Why can't a fringe area be designated? A concentration point may (or may not) facilitate the secondary transit efficiency."

Response: Designation of a carpool parking facility in a fringe area of the Downtown would be beyond the control of the project sponsor. Were the project sponsor to have control of property suitable for a carpool parking site and were the project sponsor willing to devote the use of the property to that end, then the City would have jurisdiction over approving the use.

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Comment:

Minutes of The Landmarks Preservation Advisory Board, 5 March 1980

"On page 36, the parking availability study is out of date."

Response: The parking availability survey of existing long-term, commercially available, off-street parking was conducted on 1 and 5 June, and 20 and 28 September 1978 by TJKM, Transportation Consultants. At the time the transportation analysis was prepared (ADEIR, April, 1979), the parking availability data were current. The survey has been updated to include in the cumulative parking analysis changes from the base condition within the study area.

TRANSIT IMPACTS

Comment:

Mr. John Barry

"Your Daon Environmental Impact Report does not make clear how many new commuters will come from outside of San Francisco and take the Muni downtown to work. Please estimate how many non-San Franciscans are riding the Muni during the rush hours through the various neighborhoods. How many more will be doing this in 5, 10 and 15 years due to downtown development?"

Response: The Draft EIR assumes, in general, that auto commuters would park within walking distance of the proposed project, and that, therefore, the numbers of resident and non-resident auto commuters who would use Muni would be small. These numbers cannot be reliably estimated.

Comment:

Mr. Tony Kilroy

"The (Public Transit) analysis is based on observations of Muni ridership in 1977, 1978 and early 1979... I request that the analysis of Daon's impact on Muni ridership be compared with current data and the PUC's projection of future ridership for at least the next 5 years. Specifically, the express buses from the Richmond, 1, 31 and 38 are full now at peak hours."

Response: As indicated on p. 163 of the Draft EIR, the transit analysis has considered both project-related and non-project related ridership growth on the Muni. Thus, the analysis in Tables 14 and 19 in the revised Transportation, Circulation and Parking section (pp. 74-89) shows the project impact on the Muni system including the Muni Metro, not the existing system. Current data indicate that the Richmond 1 and 38BX lines are at 88% to 90% of capacity at peak hour; the 31, 38AX, 38 and 38 Ltd. lines exceed 100% of capacity. Capacity will increase by 50% with the planned replacement of existing buses on the 38 lines with articulated buses. The travel demand data used to forecast the future transit travel

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for the environmental impact analysis is not sufficient to allow an accurate, substantiated line-by-line forecast for the purpose of determining future transit service requirements.

TRANSPORTATION DELAYS

Comment:

Ms. Susan Parker

"What might the projected cost of cumulative development be to downtown workers due to time lost in increasingly congested traffic downtown? Please include in this estimate both the increased time delays and the costs for both automobile commuters and transit riders."

Response: Estimation of the increase in delay to individual vehicles resulting from increased traffic congestion cannot be accurately calculated and still remain within the bounds of the statistical accuracy of the Transportation section. Vehicular delay on an approach to an intersection is dependent upon multiple variables (see Highway Capacity Manual, Chapter Six). To estimate the time delays to individual vehicles would require estimation of several factors, each of which could vary independently and invalidate the analysis (see also the Response to Mr. Tony Kilroy on p. 189).

CUMULATIVE TRAFFIC ANALYSIS METHODOLOGY

Comment:

Mr. Toby Rosenblatt, President, City Planning Commission

"The footnote on page 161 talking about the methodology for the cumulative traffic. I would ask that that footnote be reviewed for consistency with the data on page 157 which talks about the amount of building in the downtown in various years. I think it indicates that the -- by deduction, it implies that there are only 600,000 square feet per year being built in this period. That's what the footnote implies. The table on page 157 indicates that it is a good deal different. Therefore, the percentage growth figures are not right, if those absolute figures are not right."

Response: The average annual increase in gross sq. ft. of office space stated in Note 1 on p. 161 of the Draft EIR cannot be completely reconciled with the average annual increase in gross sq. ft. of office space stated in Table E-2 on page 157 of the Draft EIR. The growth rate of 1.7 million sq. ft. per year is for the 5-year period of 1965-70; the 1.2 million sq. ft. per year figure is for the 3-year period of 1979-81 and does not include the gross sq. ft. of floor area of the 20 cumulative office projects listed on p. 161 and treated separately as the cumulative office building development in the cumulative traffic analysis. The average annual growth rates listed in Table E-2 on p. 157 of the Draft EIR were derived from a specific list of major high-rise

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office buildings compiled by the Department of City Planning. The average annual growth rates of 1.03 million and 1.54 million sq. ft. per year presented in Table E-2 are for 10-year periods of 1960-70 and 1970-79, respectively. Since all of these figures are annual rates of growth, they are specific averages for the time intervals given. Reconciling them for consistency over different time periods is not possible.

As described in the Response under Parking Impacts on pp. 190-191, the DPATS growth rate of 1.8% per year was based on the trend between 1965-1970. It is believed that the current rate of growth is less than during the DPATS study period. Therefore, an amended rate of 1.0% per year has been used in the revised cumulative traffic analysis as recommended by the Bureau of Traffic Engineering (S. Shoaf, Associate Traffic Engineer, telephone communication, 30 April 1980). Appendix F, p. 161, Methodology Used in Cumulative Traffic and Parking Impact Analysis, has been revised and Note 1 clarified, as follows:

"Because none of the above buildings was in operation in 1976, the base year used for the cumulative analysis was 1976. As the above buildings do not comprise all of the projected growth in San Francisco, it was necessary to use a growth factor to forecast 1981 base traffic volumes (similar to the method described on p. 77 of IV. F.) The traffic growth rate of 1.0% per year used in the Traffic Impacts section was adjusted by TJKM to reflect only growth from projects not listed above (i.e., the rate was adjusted to remove travel from the above buildings). The adjusted growth rate used was 0.7% per year./1/ Information on the amount of traffic generated by each project that would affect the streets in the Financial District was derived from the EIR or special traffic report on each project. The cumulative traffic from the analyzed projects was added to the 1981 base traffic. Finally, the projected traffic volumes generated by the proposed Daon Building were added to the sum of the 1981 base and cumulative traffic volumes. A similar analysis was conducted to determine cumulative parking impacts.

"NOTE

"/1/ To adjust the growth rate to account for the cumulative analysis TJKM used a ratio based upon office growth during a specified period for which a documented traffic growth rate was known. The last documented traffic growth rate developed for downtown San Francisco was 1.8% per year for the years 1965 to 1970 developed during the Downtown Parking and Traffic Study (DPATS). The assumption was made that the growth per year in traffic would be proportional to the growth per year in office space. For the years 1965 to 1970, approximately 8,000,000 sq. ft. of office space was constructed in downtown San Francisco. This is an average of approximately 1.7 million sq. ft. of office space per year. The amount of office growth exclusive of the buildings considered in the cumulative analysis was determined from OER records to be 1.2 million sq. ft. per year between 1979 and 1981 (the period of the cumulative analysis). Thus, the ratio of office growth to traffic growth was established as follows:

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$$\frac{1979-1981 \text{ office growth/year}}{1965-1975 \text{ office growth/year}} = \frac{\text{adjusted traffic growth/year}}{\text{base traffic growth/year}}$$

or,

$$\text{adjusted traffic growth/yr} = \frac{1.2}{1.7} \times (\text{base traffic growth/year}).$$

"As the 1.8% per year traffic growth rate has been considered invalid, the traffic growth rate of 1.0% per year has been used as the base growth (see Note 6 of IV.F.). As no documentable data base for the 1.0% per year rate exists, the assumption was made that the ratio established above would remain valid with the lower growth rate. Thus the adjusted growth rate of 0.7% per year was calculated from the above formula:

$$(0.7\% \text{ per year} = \frac{1.2}{1.7} \times (1.0\% \text{ per year})."$$

ECONOMIC, EMPLOYMENT AND FISCAL IMPACTS

BUSINESSES AND EMPLOYMENT DISPLACED FROM THE SITE

Comments:

Mr. Carl Imperato, San Franciscans for Reasonable Growth

"This project would displace 11 small businesses with 250 employees and we would like to know how many of these employees are San Francisco residents and what type of work they are doing, because many of these people are going to lose their jobs. A few of the other businesses that are going to be displaced said they are just going to go out of business.

"The reason is because most of the unemployment in the City are blue collar workers but projects like this project, the Daon Building, will create white collar jobs and destroy blue collar jobs. So unemployment gets worse, not better.

"According to this EIR, 98% of the permanent jobs created by the project would be office jobs and there would only be 19 blue collar jobs. Even if we assume each of these blue collar jobs, all 19 of them, went to City residents, on the average we expect 10% or two jobs, really, then there would be total of 19 blue collar jobs for San Francisco.

"... the project is kicking out 250 employees working there now. So we like to know how many of those employees are blue collar workers that are going to be out of work. The net result is the project, which is supposed to be good for employment, will raise the unemployment rate in the City."

Ms. Susan Bierman, Member, City Planning Commission

"I wonder if we have any information or could have information as to whether those kind of businesses that are there now and their offices have more San Francisco residents..."

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Dr. Yoshio Nakashima, Member, City Planning Commission

"On page 65 where it talks about permanent employment, I guess I'd like to see some discussion about the facts that the type of job classification is changing. And although there will be supposedly 1,200 new employees versus presently 250. I think the type of work that they are going to be doing is going to change significantly and I think that's a reversed impact, I guess a negative impact for the 250 that they are going to lose their jobs and they probably aren't going to have an easy time finding a new job. And the 1,200 new employees that are going to be on the site, most everyone of them are going to be from out of town according to the rest of it. I don't know if that is good or bad, but we should look at that reverse effect."

Response: Table D-1, pp. 151-155 of the Draft EIR, included the "Approximate Number of Employees" of existing businesses, and "Current Relocation Status and Impacts on Tenants." Since publication of the Draft EIR a survey of the existing businesses on the proposed project site was undertaken in April, 1980, to determine the number, job classification and places of residence of current employees. The information from the survey, given below, represents all but 1 of the existing businesses, or approximately 98% of the employees. Responding businesses and the current number of employees on the project site (in parentheses) as provided by the survey are: Helen Culiner, law office (4); Hodge and Clark, law firm (12); Gourmet Plate, restaurant (7); Embarcadero Mortgage, Mike McCormac Realtors, and Pickey Associates (9); William J. Healey and Associates (7); Vaughn-at-Sather Gate, clothing (5); Super Soup (DBA Stone Soup) (19); M. Arthur Gensler and Associates, Inc., Architecture (142); and Daon Corporation (2 - building maintenance only). Snappy Photo did not respond to the survey; telephone communication established that they employ 2 persons.

TABLE 3a: EMPLOYMENT CHARACTERISTICS OF EXISTING BUSINESSES ON THE PROJECT SITE

<u>EMPLOYMENT CATEGORY</u>	<u>PERCENT</u>	<u>NUMBER RESPONDING</u>
Professional/Managerial	42	87
Clerical/Secretarial	26	55
Drafting	19	39
Food Service/Preparation	10	20
Retail Sales	2	4
Maintenance/Engineering	1	2
TOTAL	100	207

Source: Survey of existing tenant businesses, April 1980. The survey is on file at the Department of City Planning, Office of Environmental Review.

TABLE 3b: PLACES OF RESIDENCE OF PERSONS CURRENTLY EMPLOYED ON THE PROJECT SITE

<u>PLACE OF RESIDENCE</u>	<u>PERCENT</u>	<u>NUMBER RESPONDING</u>
San Francisco City/County	65	139
Alameda County	14	30
Contra Costa County	3	7
San Mateo County	9	19
Santa Clara County	1	3
Marin/Sonoma Counties	8	17
Santa Cruz County	1	1
TOTAL	100	215

Source: Survey of existing tenant businesses, April 1980. The survey is on file at the Department of City Planning, Office of Environmental Review.

Using the information derived from the survey, the first full paragraph on p. 30 of the Draft EIR has been revised to read:

"Employment and Tenant Mix. Business establishments at the project site provide employment for about 220 persons. The majority (about 65%) are employed by M. Arthur Gensler and Associates, Inc., an architectural firm. Other office tenants include 3 real estate companies and 2 law firms, employing a total of about 32 persons. Four ground-floor retail and restaurant establishments, including Stone Soup, employ an estimated 46 persons. (See Appendix D, Table D-1, p. 151, central columns)."

The central column of Table D-1, pp. 151-155 of the Draft EIR, has been revised according to the responses to the survey to show the current number of employees of businesses on the project site as presented above.

Table 10, (Estimated Gross Permanent Employment) on p. 65 of Draft EIR, has been revised to be consistent with Tables 3a and 3b, above, and to delete references to San Francisco Federal Savings and Loan data. The revised Table 10 differs from the original table on p. 65 of the Draft EIR in the following ways: deletion of 10 Savings and Loan employees and of 4 security employees (as a result of the withdrawal of San Francisco Federal); and an increase of 9 retail employees as a result of conversion of the Savings and Loan Savings office space to retail space. Total estimated permanent employment is therefore decreased by 5 persons, from about 1,220 to about 1,215.

TABLE 10: ESTIMATED GROSS PERMANENT EMPLOYMENT*

<u>EMPLOYMENT CATEGORY</u>	<u>PERCENT</u>	<u>NUMBER</u>
Retail	1	15
Office	98	1,190
Maintenance & Security	1	10
TOTAL	100	1,215

*The table assumes 600 net sq. ft. per retail employee, 200 net sq. ft. per office employee, and zero vacancy, and represents a probable daytime population of about 1,215 persons.

The existing employment on the site is predominantly professional, clerical, drafting, food service, and retail sales (99%). Proportionately, the existing employment mix is similar to the proposed project employment; that is, approximately 99% of the resulting jobs will be office and retail sales jobs. Total permanent employment would increase in office jobs, retail sales, and maintenance and security. Food service jobs would be reduced unless retail space in the proposed project were to be occupied by a restaurant. In addition, construction employment associated with the project is expected to provide an average of 120 full-time jobs during the 1-1/2 year construction period, as noted on p. 66.

Since publication of the Draft EIR, there have been changes in the status of anticipated job losses resulting from displacement due to the proposed project. The 2 businesses that anticipated closing (as noted on p. 67 of the Draft EIR), The Gourmet Plate and Stone Soup, no longer expect to close. The Gourmet Plate restaurant is seeking relocation assistance from the Mayor's Office of Economic Development and expects to remain in business at a different location following termination of their lease. Stone Soup has expressed interest in occupying ground-floor retail space in the proposed project. Although there would be temporary closing due to relocation, jobs in these 2 businesses would not be lost as a result of the proposed project.

RELOCATION OF EXISTING BUSINESSES

Comment:

Dr. Yoshio Nakashima, Member, City Planning Commission

"I guess then on page 67, there is discussion about the retention of small business firms in San Francisco is the goal of the Mayor's Office of Economic Development and that they provide relocation advice and loan assistance to displace firms. I'd like to know specifically what, if any, discussion has

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taken place with those being displaced and if any positive relocations are going to happen. I'd like to see that in the EIR as well."

Response: By means of the questionnaire referred to in the Response under Businesses and Employment Displaced from the Site, p. 196, existing businesses were surveyed to determine if they had contacted, or planned to contact, the Mayor's Office of Economic Development for relocation assistance. Of the 10 businesses surveyed, 1 restaurant tenant, the Gourmet Plate, employing 7 persons, had contacted the Mayor's Office of Economic Development. The owner of the Gourmet Plate indicated that he intends to seek loan assistance from the Mayor's Office of Economic Development to lease or purchase a new restaurant site, but so far has been unable to contact the person in charge of loans at that office (S. Chin, Owner, Gourmet Plate Restaurant, telephone communication, 1 May 1980).

As discussed in the Draft EIR on pp. 66-67 and in Appendix D, Table D-1 on pp. 151-155, 2 of the existing businesses, both restaurants with a total of 26 employees, anticipated closing as a result of displacement from the project site. However, since publication of the Draft EIR, 1 of the businesses (The Gourmet Plate) has sought relocation assistance, and the other (Stone Soup) has expressed interest in occupying ground floor retail space in the proposed project. Another business, an advertising firm, may relocate outside of San Francisco to Santa Clara County. However, no other tenants indicated they would close or relocate outside San Francisco if displaced from the project site. M. Arthur Gensler and Associates, Inc., Architects, the largest existing employer on the site, now occupying space in 2 buildings proposed for demolition, plus office space at 550 Kearny St., would have the opportunity to consolidate office space in a new location. A spokesperson for Gensler and Associates states that the company is currently negotiating for a new location for their offices. Gensler Associates further indicates that new office space would be more functional, as it would allow the company to centralize office functions that are currently dispersed over several floors and buildings.

Daon Corporation indicates that, if requested by tenants, it would provide a real estate broker to assist tenants in finding new office, retail, or restaurant space.

SECONDARY INCOME GENERATION

Comment:

Dr. Yoshio Nakashima, Member, City Planning Commission

"On the bottom of the page it talks about the \$8.7 million worth of secondary income generated by this project. It's kind of hard to compare that against anything because there is no discussion about what the present secondary income effect is of what's there now. So what does \$8.7 million mean compared to what. I'd like to know what that relates to."

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Response: The \$8.7 million of annual secondary income stated on p. 65 of the Draft EIR was based on an estimate that 67% of the employees at the Daon Building would be San Francisco residents. This percentage has been revised to 42%, based on averages from 4 employee surveys and 2 modelling studies summarized in Table F-4 in the revised Appendix F, p. 160a. The revised figure for annual secondary income generated in San Francisco by the Daon project is an estimated \$4.6 million.

According to a survey in April 1980 of existing businesses at the Daon site, approximately 65% or about 140 of the persons currently employed at the project site are San Francisco residents. These employees would spend an estimated \$1.2 million of annual secondary income in San Francisco, as compared to the \$4.6 million of annual secondary income that would be generated by employees in the Daon project.

The following discussion of secondary income effects of the existing project site has been added to p. 30 of the Draft EIR:

"Secondary Income Effects. Secondary employment and income effects result from persons employed at the project site because each employed person generates additional employment opportunities and income by his or her demands for goods and services. Previous studies have indicated that San Francisco resident employees spend 80% of their disposable income in the City, creating secondary income and employment. Based on an April 1980 survey of businesses at the Daon site, an estimated 65% or about 140 of the employees at the project site are San Francisco residents, generating an estimated \$1.2 million of secondary income in San Francisco each year (based on an average annual disposable income of about \$15,000 minus 25% gross taxable income for office workers and \$10,000 minus 22% gross taxable income for retail and maintenance workers)."

The secondary income effect discussion contained on pp. 65-66 of the Draft EIR has been revised as follows:

"Secondary Income Effects. Based on surveys of the places of residence of employees at existing Downtown high-rise office developments and data from the Metropolitan Transportation Commission, an estimated 42% or about 510 project employees, would be San Francisco residents. Assuming that employees at the Daon Building would spend 80% of their disposable income in the City, approximately \$4.6 million of secondary income would be generated in the City (based on an average annual disposable income of about \$15,000 (1979 constant dollars) minus 25% gross taxable income for office workers and \$10,000 minus 22% gross taxable income for retail and maintenance and security workers). This amount would represent about a 285% increase over the \$1.2 million of secondary income currently generated from the project site. This does not imply that all of the secondary income generated by Daon building employees would be new to the City, since firms already located in the City would be expected to relocate to the proposed building, nor does it

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imply that all of the secondary income generated by existing employees on the project site would be lost to the City since many of the displaced firms would be expected to relocate elsewhere in San Francisco.

"A 1974 survey of Downtown office workers by Keyser Marston Associates, Inc. estimated that taxable annual expenditures for meals, apparel, cosmetics and so forth by workers are about \$950 per capita (escalated at 6% annually to 1979 dollars)./3/ Total Downtown expenditures by permanent project employees are estimated at \$1.1 million annually. Approximately \$479,000 or 42% of these expenditures would be included in the \$4.6 million of total annual secondary income described above."

INDIRECT ECONOMIC AND FISCAL IMPACTS

Comment:

Minutes of The Landmarks Preservation Advisory Board, 5 March 1980

"On page 71 'secondary dislocation effects' on older buildings should be clarified, as should 'lack of maintenance'."

Response: Secondary dislocation effects refer to indirect economic effects on older, mostly pre-war office space caused by recent cumulative downtown high-rise development. Essentially, indirect or secondary dislocation effects would occur because the demand for older pre-war office space would decrease in relation to the demand for newer, more efficient high-rise office space. High-rise offices recently completed or proposed for construction could be expected to be occupied partly by existing San Francisco firms that would vacate high rises built in the 1960s and early 1970s. Smaller firms currently occupying older pre-war office space could also be expected to upgrade to larger more efficient spaces in post-war high-rises (constructed mostly between 1960 and 1974) that would be vacated by firms that would move to the newer, high-rise office space, resulting in secondary vacancies in older, pre-war buildings. As demand decreases for space in older, pre-war office buildings, reduced rents and higher vacancy rates would occur. This situation could lead to postponement of necessary repairs or "deferred maintenance" by landlords of older buildings because their cash flow would be reduced by increased vacancies and lower rents, but the variable and fixed costs to operate the property would remain relatively constant.

In order to clarify "secondary dislocation" effects and "deferred maintenance", pp. 71-72 of the Draft EIR have been changed as follows:

"Secondary dislocation effects, such as reduced rents and higher vacancies, could also occur in older downtown offices because the demand for older pre-war office space would decline relative to the demand for newer high-rise office space. As various firms upgrade to

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relatively high-rent spaces vacated in high-rises built in the 1960s and early 1970s, secondary vacancies could occur in older, pre-war buildings. Reduced rents and/or higher vacancy rates in these older buildings could lead to postponement of necessary repairs or 'deferred maintenance' as landlords' incomes decrease and their costs remain relatively constant."

DOWNTOWN OFFICE SPACE

Comment:

Mr. Carl Imparato, San Franciscans for Reasonable Growth

"On page 31 the text states that San Francisco has about 56 million gross square feet of office space. That figure should be updated. Downtown San Francisco alone had 50 million square feet in 1974 and since then new construction has been close to 2 million square feet a year."

Response: As stated in Note 4 on p. 33 of the Draft EIR, the 56 million square foot estimate of existing office space inventory is based upon the 50 million sq. ft. of space given in the 1974 SPUR-sponsored survey, plus the estimated 6 million sq. ft. of high-rise office space in 9 buildings completed from 1976 to 1979. The 50 million sq. ft. estimate includes both low- and high-rise office space in San Francisco. Estimates of the gross floor area of downtown office development construction after 1979 were provided by the Department of City Planning in a list titled "Major Office Buildings Constructed in Downtown San Francisco, 1945-1977" and addenda to that list titled "Major Office Buildings Proposed and to be Proposed, First Quarter 1978" and "Major Office Buildings Proposed and to be Proposed, First Quarter 1979". These lists include only major high-rise office developments of 10 stories or more in Downtown San Francisco. According to information provided by the Department of City Planning, no major high-rise buildings were completed in 1975.

ECONOMIC IMPACTS ON CITY SERVICES

Comment:

Mr. Carl Imparato, San Franciscans for Reasonable Growth

"We'd also like to see a statement about the longer term financial impacts of this project on the City, something that says what would the impacts be for 1985 and 1990; because the property tax revenues for this building are going to be going up by about 2% annually but service costs are going to go up at least 15% a year given their historical data for the last 10 years. So we'd like to know how much the project will cost the City in the future 5 years down the road, 10 years down the road."

Response: The fiscal impacts of the Daon project cannot be accurately projected for 1985 and 1990 because there is no assurance that the information on which assumptions are based will not change. The long-term

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fiscal effects of Proposition 13 are not yet fully understood; the effects of the recently approved Proposition 4 (which limited budget appropriations by state and local entities) cannot be determined at this time because implementing legislation for this Proposition has not yet been enacted. In view of current economic uncertainties, all projections have a margin of error which cannot be quantified.

As discussed on p. 72 of the Draft EIR, in the long run, costs to provide public services to Downtown high-rise office development would generally be expected to increase with the rate of inflation, while property tax revenues would be limited to a 2% per year increase by Proposition 13. Thus, under the currently known fiscal structure of San Francisco, increase in public costs to provide service to Downtown development can be expected to exceed increases in the revenues from those Downtown projects whose primary public revenue is from property taxes.

Comment:

Dr. Yoshio Nakashima, Member, City Planning Commission

"On page 69, there is something about there is no direct net effect on the schools if this building goes or if downtown office development continues on. I feel that there is going to be some kind of effect. To say that there is no direct effect, I would like a little bit more clarification about what does it mean. There is not going to be more school teachers hired? Or we are going to close more schools or we are not going to close more schools? What's the more direct net effect. I'd like to have clarification on that."

Response: The proposed project would not have a direct economic effect on school expenditures because Downtown commercial development does not increase the demand for school services and does not require expenditures for additional teachers, administrative staff or classroom equipment. Commercial development such as the Daon building, however, would increase the proportion of total school expenditures financed by the property tax.

The proposed project would have no direct fiscal effect on whether or not a school would have to be closed to San Francisco. The San Francisco School District considers several factors in determining whether or not a school site would be closed such as available classroom capacity, average daily attendance at a particular school, the condition at the building, racial balance and the District's overall annual operating budget (P. Tom, Budget Director, San Francisco Unified School District, telephone communication, 13 May 1980).

The proposed Daon Building could have an indirect fiscal effect on school expenditures to the extent that it would attract new families to San Francisco who would demand additional school services. The San Francisco Unified School District currently has available classroom capacity and would not require additional expenditures for teachers or school equipment. These additional families, if they would become new homeowners, would contribute additional property tax revenues to the City and County, thereby increasing the proportion of total school expenditures financed by the property tax.

IMPACTS ON TRANSIT OPERATING COSTS

Comment:

Mr. Carl Imparato, San Franciscans for Reasonable Growth

"On page 69 the claim is made that increased taxes would offset the marginal costs to the City and County for public services to the project. But that claim neglects Muni costs which were treated on the next page because Muni costs are estimated on the next page to be \$225,000 per year... So we feel this statement should be removed or actually preferably changed to say that increased taxes would not offset the costs of the building."

Response: As the commenter states, the second paragraph on p. 69 of the Draft EIR does state that "Increased City and County property taxes and payroll/business taxes, plus user charges and continuing sales taxes from the project would offset incremental (marginal) costs to the City and County of public services for the project site. The phrase "public service costs" as used in this sentence refers only to public service costs for fire, police, water, sewer, general administrative and street-related costs; it does not include public transit costs. Muni transit costs are discussed beginning in the fourth paragraph on p. 69 of the Draft EIR. This discussion was separated from the discussion of other public services because incremental public transit costs are related to a variety of fiscal considerations that involve state and local subventions, while incremental police and fire service costs may be more directly related to an individual project. Page 69 of the Draft EIR has been revised as follows:

"City and County costs attributable to the site can be viewed as the site's proportion of increased costs attributable to Downtown cumulative commercial growth. Increased City and County property taxes (\$229,500 to \$270,200) and payroll/business taxes (\$74,400), plus user charges and continuing sales taxes from the project site would offset incremental (marginal) costs to the City and County of providing police, fire, water, sewer, general administrative and street-related services for the project site."

Comments:

Mr. Carl Imparato, San Francisco for Reasonable Growth

"As soon as the building is occupied it would increase Muni cost by about \$225,000. It would increase BART cost by \$89,000 and if we add inflation to these numbers, it is clear just the costs of the public transit alone are going to exceed the total property taxes and business taxes this project would generate. That doesn't include the other costs that the City has to pay for government administration, fire protection, police protection, and just a host of City services."

Mr. David Jones

"They show on page 70, though, that right off the bat, the Muni deficit will be \$225,000... the amount we pay Muni drivers, etc., is going to go up at the cost of the inflation. We can guarantee you are not only going to lose money right off the bat on this building, but you are going to lose money more every year."

Response: Muni transit costs attributable to the Daon building would be partially covered by the estimated \$303,900 to \$344,600 of annual property and payroll taxes generated by the project. These revenues would accrue to the City's General Fund from which Muni receives part of its annual operating budget. Additional sales and franchise tax revenues would be contributed to the City's General Fund each year to further offset the Muni transit costs of the Daon project. Since the publication of the Draft EIR, Muni has been granted a fare increase to \$0.50 (effective 1 April 1980) which has affected the estimated Muni per-paid-passenger fare deficit and its funding sources. The Muni per-paid-passenger fare deficit is currently estimated at \$0.45 (D. Cole, Grants Administrator, San Francisco Municipal Railway, telephone communication, 28 March 1980 and 17 April 1980), resulting in an annual Muni operating deficit of \$141,000 attributable to the Daon project as compared to the per-paid-passenger deficit of \$0.54 and an annual operating deficit of \$225,000 stated on p. 70 of the Draft EIR. Approximately 40% of the fare deficit is made up by City ad valorem taxes including property and payroll taxes. The remaining deficit is made up from local, state and federal subventions.

As a result of this fare increase, at least 1/3 of Muni's annual operating revenue is expected to be generated from the fare box which, under Assembly Bill 1107, allows Muni to receive a portion of the one-half cent BART sales tax revenues for operating expenditures. This additional sales tax would increase the portion of Muni's operating deficit that is met by local subventions, thereby decreasing the portion of deficit borne by San Francisco tax payers. In order to clarify the project's net fiscal effect on the City and County with respect to Muni, and to incorporate the recent changes in Muni's operating costs, the fourth paragraph on pp. 69-70 of the Draft EIR has been expanded to read as shown below:

"Muni would incur cost increases to provide service to the Daon project. Muni currently estimates an average paid passenger fare deficit of \$0.45, including the recent fare increase to \$0.50 effective 1 April 1980. (D. Cole, Grants Administrator, San Francisco Municipal Railway, telephone communication, 28 March 1980). The \$0.45 fare deficit is made up by City ad valorem taxes and State and Federal subventions. Muni does not anticipate a decrease in this deficit in the near future, because planned improvements such as the Muni Metro system will increase future costs in proportion to increased passenger ridership. Muni does expect, however, that the portion of the fare deficit covered by State and Federal subvention will increase, thereby decreasing the portion of the deficit borne by San Francisco taxpayers (L. Elliot, Cost Accountant, San Francisco Municipal Railway, telephone communication, 8 January 1980)."

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"Under worst-case Muni ridership conditions, the Daon project would generate an estimated 1200 Muni trips per day, resulting in a total annual Muni operating deficit of \$141,000 attributable to the Daon project. This would represent a net increase of \$114,000 over the existing Muni per-paid-passenger fare deficit of \$27,000 currently resulting from the proposed project site. Project-generated property and payroll tax revenues would accrue to the City's General Fund from which Muni receives part of its annual operating budget. The estimated \$303,909 to \$344,600 of property and payroll taxes generated from the Daon building would be available to meet the portion of the fare deficit (\$56,000 or 40%) paid for from the City's General Fund. The remaining fare deficit of \$85,000 would be met by local, state and federal subventions.

"According to estimates of project-generated Muni ridership (see IV.F, p. 80), Muni lines serving the site in 1981 would be operating at 63% of total seated and standing capacity (averaged over the 1-hour peak). Muni would not be expected to have to add buses or increase capital outlay costs, beyond planned increases in service and capital costs, to provide peak-hour service to riders from the project. The planned increases over existing Muni capital costs are based on the additional capacity that would be required to provide service to cumulative Downtown development, including the Daon project. A methodology for determining an individual project's proportionate share of those additional Muni capital costs has not been developed at this time (L. Pio, Transit Environmental Coordinator, Public Utilities Commission, Utilities Engineering Bureau, formerly San Francisco Municipal Railway Transit Improvement Program, telephone communication, 8 May 1980)."

Comment:

Ms. Ina Dearman, Member, City Planning Commission

"I was really not satisfied with the discussion about the impacts and the cost of Muni and BART."

Response: The project's effect on Muni costs are discussed above. The second paragraph on p. 70 of the Draft EIR has been revised to reflect estimates of BART ridership based on the revised Transportation, Circulation and Parking section. The new ridership estimates indicate that increased BART ridership attributable to the Daon project would result in an annual operating deficit of about \$209,000. The BART operating deficit is made up primarily by the half-cent BART sales tax. As noted on p. 70 of the Draft EIR, increased direct sales tax revenues from the retail uses proposed from the site and the indirect sales tax revenues from purchases by workers at the Daon building would partially cover this annual deficit. The amount of direct and indirect sales tax revenues that would be generated from the Daon project cannot be estimated accurately because the types of retail uses that would be located at the site are unknown at this time and taxable sales of workers in the counties which levy a BART sales tax cannot be traced.

Mr. David Jones

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Comment:

Ms. Ina Dearman, Member, City Planning Commission

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Comment:

Mr. Tony Kilroy

"Will Daon pay Muni's additional fuel and operating expenses because Daon increases traffic congestion in these areas (at the intersections of Main, Market, California and Drumm Sts. and Beale, Market, Davis and Pine Sts.)."

Response: The Level of Service at the Main, Market, Drumm, and California Sts. intersection would not change under 1981 base conditions, nor with the increased traffic generated by the proposed Daon building. At the intersection of Beale, Market, Davis, and Pine Sts., the Level of Service would decrease from C to D under the 1981 base condition; the additional traffic generated by the Daon project above the 1981 base condition would not reduce the Level of Service below D. As discussed in the third full paragraph on p. 72 of the Draft EIR, vehicle congestion attributable to cumulative Downtown development is a public cost that cannot be quantified for an individual project. Until a public determination is made to decrease vehicle congestion by funding new capital improvements for transportation systems, "the costs of congestion due to private vehicles would be borne privately in the form of delays, and vehicle-related costs, including air pollution."

Comments:

Ms. Susan Parker

"What would be the overall cost impact of this building (and of cumulative development) on public transit systems Bay Area-wide (including AC Transit, Southern Pacific, etc.)? How much of these costs will be paid for by taxpayers through government subsidies to fund the resulting deficits to the respective transit systems?"

Mr. T.R. Lammers, District 4 Director, CALTRANS

"Transit service and other high occupancy vehicle considerations were fairly well detailed in existing setting and impact sections. What is not clear is whether the project itself will require the purchase of additional equipment (buses, light rail, vans). If the answer is affirmative, where does the financial liability lie?"

Response: According to the revised Table 19 on p. 87, the only Bay Area public transit agency that would exceed capacity because of cumulative ridership increases (including the Daon project) would be the San Mateo County Transit District (SamTrans). SamTrans would operate at 189% of its existing capacity with cumulative ridership increases. A spokesperson for SamTrans indicates that SamTrans is the only designated recipient in San Mateo County for funds from the Federal Urban Mass Transit Agency (UMTA), which SamTrans uses to pay for its annual operating cost deficit. SamTrans currently leases, rather than purchases, buses to meet increased rider demand. Federal UMTA funds are also used to fund SamTrans' capital cost expenditures (J. Dehart, Program Analyst, General

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Administration Office, SamTrans, telephone communication 8 May 1980). Ultimately all taxpayers would pay for increased operations and capital costs to SamTrans of providing transit service to the Daon project and cumulative development because Federal funds would be used to meet these increased costs.

Comment:

Mr. John Elberling, San Francisco Tomorrow

"When they list the financial impacts on the City services, in your cumulative section of that in the EIR's, you should attempt to fix what fare increase we are going to have to have next year to pay for the extra buses, presuming that we could get them, to meet the extra demand that all these projects generate."

Response: Table 19, on p. 87 of the Draft EIR indicates that Muni bus lines serving the Daon Building would operate at about 87% of total seated and standing capacity in 1981. Muni fare-box revenue is used to fund only operating costs and is not used for capital expenditures. Muni fare increases are basically set at an amount that would balance the annual operating budget. The primary reason for Muni's recent fare increase to \$0.50 was to increase the proportion of fare box revenue to 1/3 of the total annual revenues received. This increase would allow Muni to receive a portion of the half-cent BART sales tax revenues, thereby increasing the funding for Muni's annual operating budget.

Approximately 80% of Muni's capital costs are funded by federal subventions, such as Urban Mass Transit Agency (UMTA) funds, by state subventions such as gas tax revenues, and by local funding such as the San Francisco Municipal Railway Transit Improvement Corporation.

IMPACTS ON TRANSIT CAPITAL COSTS

Comments:

Mr. Carl Imperato, San Franciscans for Reasonable Growth

"We all know Muni has already taken the fact that these projects are coming up into account in their planning. So to say that Muni won't have to add any more buses, or pay any more money for capital expansion because it is already planned for, is a bit misleading; kind of tries to give the reader the impression that there are no increased capital costs. So that statement really ought to be modified or taken out. And you'll note that on page 87 in the table, kind of hidden, nowhere else really explicitly stated in the report, (it) says the cumulative growth downtown is expected to increase Muni demand in the area of 44% by 1981. And that sure is going to have a hell of an impact on Muni capital costs."

Mr. Carl Imparato, San Franciscans for Reasonable Growth

"There is also a statement on page 69 that I think deserves some comment and that's that -- I'll quote -- says the Muni would not be expected to have to add buses or increase capital outlay costs beyond planned increases in service or capital costs in order to service the project."

Response: The commenter is correct in stating that there would be capital cost increases for Muni attributable to cumulative Downtown office projects, even though Muni would not have to add buses or increase capital outlay costs beyond planned increases in service and capital costs to provide peak-hour service to riders from the project. The planned increase of capital costs to provide service to the project is based on the additional capacity that would be required to provide transit service to cumulative downtown development, including the Daon building. A method for determining the Daon building's proportion of those increased costs has not been developed at this time (L. Pio, Transit Environmental Coordinator, Public Utilities Commission, Utilities Engineering Bureau, formerly San Francisco Municipal Railway Transit Improvement Program, telephone communication, 8 May 1980). (See also the Response under Mitigation - Transit, p. 221.)

Generally, increased Muni capital costs to serve the project can be considered as the project's proportion of increased costs attributable to Downtown cumulative office growth. In order to clarify the project's effect on Muni capital costs, the capital cost discussion in the third paragraph on p. 69 of the Draft EIR has been revised to read as shown below and as indicated in the Responses under Impact on Transit Operating Costs on p. 205.

"Muni would not be expected to have to add buses or increase capital outlay costs, beyond planned increases in service and capital costs, to provide peak-hour service to riders from the project. The planned increases over existing Muni capital costs are based on the additional capacity that would be required to provide service to cumulative Downtown development, including the Daon project. A methodology for determining an individual project's proportionate share of those additional Muni capital costs has not been developed at this time (L. Pio, Transit Environmental Coordinator, Public Utilities Commission, Utilities Engineering Bureau, formerly San Francisco Municipal Railway Transit Improvement Program, telephone communication, 8 May 1980)."

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ENERGY

ENERGY CONSUMPTION BY EXISTING BUILDINGS

Comment:

Mr. Charles Starbuck, Member, City Planning Commission

"On page 96 and 97, there's a discussion of energy consumption for the project itself. I think it would be helpful if included in this discussion would be a summary of the energy consumption presently on the affected site, the buildings presently on the site for comparison's sake; both electrical and gas. So that we can have some kinds of per capita consumption rate."

Response: According to M and T Properties, owners of the 3 buildings on the site, the existing structures required about 453,000 kilowatt-hours of electric energy per year (4.6 billion BTU-at source) in 1979. The average monthly consumption was about 38,000 kilowatt-hours or about 1.2 kilowatt-hours of electricity per sq. ft. per month. They also required about 1.3 million cu. ft. of natural gas per year (1.4 billion BTU-at source). The average monthly consumption was about 110,000 cu. ft. or about 129 BTU per sq. ft. per day. This information is presented on a per sq. ft. basis rather than a per capita basis to allow direct comparison with the energy use estimates for the proposed project. The project would use an estimated 1.3 kilowatt-hours of electricity per sq. ft. per month and about 45 BTU of natural gas per sq. ft. per day.

ENERGY CONSUMPTION BY THE PROJECT

Comment:

Ms. Ina Dearman, Member, City Planning Commission

"... on page 3, the project would be designed and constructed to be within the the minimum standards of energy conservation. I am a little bit upset in 1980, we are still accepting the minimum standards of energy conservation. I think we should expect more."

Response: The proposed project would use about 12% less energy than would be allowable under the State minimum energy conservation standards. The State minimum standards are based upon actual energy usage for typical non-residential buildings which are equipped with state-of-the-art lighting, heating, cooling and ventilation systems. The objective of the standards is to eliminate past inefficient design practices.

For comparison, the figures given on p. 97 of the Draft EIR, show the proposed project would use 10% to 50% less electrical power per sq. ft. than new high-rise structures built prior to implementation of the conservation standards. It would use 70% to 85% fewer BTU's of natural gas per sq. ft. As stated on p. 96 of the Draft EIR, the proposed project would incorporate ventilation, heating, and air conditioning systems which minimize heat waste and excessive cooling. The building design would

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include insulation and energy conserving heat and lighting fixtures. Other energy mitigation measures are discussed on pp. 109 and 113 of the Draft EIR, and in the Response under Mitigation - Energy, p. 222.

Susan Bierman, Member, City Planning Commission

"On page 45 there is a sentence at the bottom of the page, 'PG&E obtains a portion of its electrical energy from renewable resources, including geothermal and hydroelectric power; it will meet new demands for energy primarily by increasing coal, oil, natural gas and nuclear fuels.' Maybe that statement, 'nuclear fuels,' has been in other EIRs, but I don't remember it. I would like some information as to whether it is the impression that if we continue highrise development that's going to be a reality. But if we are creating in each City and throughout the land needs, I mean Charlie Starbuck is way ahead of us all on it, on the energy thing, and I really would like in this EIR to have some more about that line and then I would like our Department to start really looking at that reality and how it relates. I know it is a very difficult thing to do; but I think it's time to do it."

Response: Pacific Gas and Electric Company (PG&E) plans to meet most of the increasing electrical demands in its service area by increasing its generating capacity with new power plants which use non-renewable fuels and by purchases of power from other utilities. These sources would be used to provide electrical power for increased demands from all development, including residential, commercial and industrial developments. Among the new power plants which are anticipated by PG&E are the Diablo Canyon nuclear power plant in San Luis Obispo County, the proposed Potrero Unit Number Seven natural gas-fired power plant in San Francisco County, and the proposed Montezuma coal-fired power plant in Solano County. Much of the purchased power would come from hydroelectric and nuclear power plants located in Washington state.

GEOLOGY

Comment:

Minutes of The Landmarks Preservation Advisory Board, 5 March 1980

"On page 46, the language dealing with the fill is not as specific as it should be. There should be a better discussion of filling between 1849-1852. There should be a statement that soil tests will be made."

Response: Little information exists regarding the artificial fill in Yerba Buena Cove since no records were kept of the filling activity. The fill was placed rapidly and haphazardly as the City grew following the gold rush. Much of the fill was dune sand excavated for building and street construction. The composition varies considerably from place to place; the materials are as noted on pp. 25-26 and p. 46 of the Draft EIR.

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The depth of fill at the site is unknown. At the nearby site of the 101 California St. Building at Front and California Sts., the geologic profile indicated a fill depth of about 20 feet. A similar depth may occur at the Daon building site. More detailed information on the fill would be obtained at the time a soils investigation of the site is conducted, and soil tests at the site would be made prior to the development of the completed engineering designs for the proposed project.

The instability of the artificial fill was evident in the 1906 San Francisco earthquake; some of the worst damage occurred in the fill material. Artificial fill areas showed effects of severe shaking by buckling of the ground surface, fissuring, cracking, lateral movements and subsidence. These effects were caused by failure of the soft Bay muds and loose sands lying below the ground surface (URS/J.A. Blume and Associates, Engineers, 1974, San Francisco Seismic Safety Investigation, prepared for the Department of City Planning, City of San Francisco).

Comment:

Minutes of The Landmarks Preservation Advisory Board, 5 March 1980

"On page 46, the dates of 'between 1870 and 1875' for the seawall are inaccurate. The first seawall was built between 1867 and August 1870 along Front Street and east from Jackson to Howard."

Response: The last sentence on the second paragraph on p. 46 of the Draft EIR has been revised to read: "Between 1867 and August 1870, the first seawall was constructed along Front St. and south from Jackson St. to Howard St. to protect the fill."

HYDROLOGY

Comment:

Minutes of The Landmarks Preservation Advisory Board, 5 March 1980

"On page 113, the report does not talk about the hydraulic impact and why measures are needed, and the effect on other buildings. On page 114, first paragraph, the comment applies."

Response: Although dewatering for the project is expected to occur only during rainstorms, possible impacts on streets and buildings from dewatering are described in the first paragraph under Hydrology on p. 102 of the Draft EIR as follows:

"Dewatering would be conducted at the site for an estimated 26 weeks. The water would be discharged into the storm drain system. The dewatering might produce some local subsidence in compressible geological materials such as artificial fill and soft Bay mud."

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Settlement of these materials might damage older brick and masonry buildings in the immediate vicinity of the site. The walls of such structures might crack or lean out of plumb and floors might be bent or tilted out of horizontal. Streets and sidewalks could develop swales, cracks or 'potholes', thereby creating a potential traffic hazard. Underground utility lines, e.g. sewers, water mains, power and telephone lines, might be bent or broken by the settlement or lateral shifting of soil caused by dewatering. Because of the potentially high costs of repairs associated with such damages, the Department of Public Works generally requires that a Surety Bond be posted before issuance of permission for excavation. The construction contractor would be held responsible for any damage which might result from dewatering."

Measures which have been agreed to by the project sponsor to mitigate potential dewatering impacts are given on pp. 113-114 of the Draft EIR. These measures include: installation of groundwater observation wells; the establishment of control lines and benchmarks; groundwater recharge, if necessary; and retention of dewatering wastes in a holding tank, if necessary, to prevent sedimentation of storm drain/sewer lines.

GROWTH INDUCEMENT

Comment:

Minutes of The Landmarks Preservation Advisory Board, 5 March 1980

"On page 104, the last paragraph is inaccurate and subjective. Development may take place, but it is not certain. 'Growth effect' is not substantiated. The report does not give the sense of what is near the building, so the impact can't be known.

"On page 105, third paragraph should be expanded and clarified if it is to remain."

Response: The report states that the project itself would represent a continuance of the trend toward replacement of older buildings in the Financial District. The areas to the east of the project site, on both sides of Front St., and portions of the area on the west side of Battery St. opposite the project site, are considered to be future development sites by the Center City Circulation Program study group which is functioning as part of the inter-agency Transportation Policy Group. This implies that it is expected that there will be pressures for new development on such sites (A. Lubliner, Project Manager, Center City Circulation Program, telephone communication, 14 April 1980.) The rapidly changing status of the economy at the local, state, and national levels, precludes a meaningful estimate of the probable timing of such development. The description of what is near the site is expanded on p. 17 of the Draft EIR (see also the Responses under Architectural Resources, p. 173). In addition Figure 11a, Building Heights in the Project Vicinity, has been inserted following p. 19.

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Comment:

Ms. Susan Bierman, Member, City Planning Commission

"On page 105, it talks about growth in other parts of the City being hindered. If we keep building downtown, the likelihood of building South of Market office buildings would be less. It brought to mind to me and it's not listed in here and I'd like it mentioned, if there is any relevancy. The project that we all okay'd early on, three towers that Mr. Yerby wanted to build and the Hunters Point people wanted it desperately, we had a policy against it and we changed our whole policy in order to facilitate that building... I have heard that that project has had a lot of trouble in that part of the City because it can't compete with downtown. Now, maybe we have to start thinking about those sort of things. And so, at a minimum, if it's correct, I'd like that to be -- that part of the City mentioned as well as South of Market."

Response: The commenter is referring to the San Francisco Executive Park Development located in the Bayview/Hunter's Point neighborhood in the southeastern section of the city. This project will be constructed in three phases and will contain a suburban office park, restaurant, hotel, convention and meeting facilities. One of the objectives for developing this project, as stated by the project sponsor, is to "attract additional business to San Francisco and to retain those that might consider leaving the City for a more convenient suburban location." This objective indicates that the San Francisco Executive Park is intended for a commercial office market not oriented to the downtown, and therefore, different from the market for space in the proposed project. A spokesperson for Campeau Developers, the current property developers, indicates that leasing for the San Francisco Executive Park is going fairly well. The first-phase office tower began leasing in December of 1979 and is currently about 45% occupied. The developer expects that leasing will be completed in 12 to 18 months due to the current recession (R. Mancini, Campeau Developers, telephone communication, 12 May 1980).

Cumulatively, an oversupply of office space in downtown San Francisco would not directly affect the demand for commercial office developments such as the San Francisco Executive Park because the demand for that type of project would come mainly from businesses that are not dependent on a downtown location to conduct their operations.

Comments:

Mr. Toby Rosenblatt, President, City Planning Commission

"The discussion on page 104 with respect to the growth inducement and the impact on housing, the second paragraph, I think should be modified. That is a simplistic version of describing a situation in its worst-case fashion."

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Mr. Charles Forester, Director of Planning, ABAG

"... the Draft EIR projects a worst-case analysis of a housing demand of 2/3 to 1 year's supply of housing starts in the city (1000 units)... that the impact on housing outside San Francisco would be intensified.... Staff (ABAG) therefore requests the the Final EIR include a thorough analysis of the impact of employment generated by this project on the City's housing market, including areas likely to provide housing outside of San Francisco."

Response: The second sentence of the second paragraph on p. 104 of the Draft EIR concerning housing effects has been revised to read:

"Assuming that 1 of each 3 new jobs at the Daon building would result in the formation of a new household and that about 42% of these new households would want to live in San Francisco, new employment at the project site would create additional (indirect) demand for about 170 housing units. These units would represent one-tenth to one-fifth of a year's supply of housing starts in San Francisco."

The impact of employment generated by the project on the City's housing market has been described on pp. 103-104 of the Draft EIR. It states that:

"To the extent that the project attracts new residents or commuters who would not otherwise have been attracted to San Francisco or the Bay Area, it may be viewed as employment-generating and growth-inducing, resulting in a variety of indirect growth effects. These would include additional demand for housing in San Francisco and the region, now in short supply. Other indirect growth effects resulting from new residents attributable to the proposed project include additional demands for a variety of commercial, social, medical, and municipal services, and secondary demands on streets, freeways and transit systems. This increased demand will have a general tendency to increase City residential rents and sale prices somewhat, but in the context of uncertain future construction activity, inflation, and other sources of housing demand, its influence on future housing costs cannot be stated conclusively....

"Employees who would not live in San Francisco would be expected to contribute to the demand for housing elsewhere in the region.... The areas outside of the City which would be likely to provide housing would be Contra Costa County; Marin County, particularly Novato; and southern Alameda County, particularly Fremont."

SUMMARIZATION OF IMPACTS

Comment:

Mr. Carl Imparato, San Franciscans for Reasonable Growth

"Cost will exceed its revenues to the City, lead to higher rents for City residents, will lead to more displacements of lower income residents, will lead to displacement of small businesses, will increase downtown office space

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rentals. It will shadow widely used public areas at mid-day. It will destroy two landmark quality buildings. It will increase parking deficit by 630 spaces; will lead to more Muni crowding, 855 more commuters, loss of retail services and blue collar jobs."

Response: For an expanded discussion of project costs and revenues, refer to the Responses under Impacts on Transit Operating Costs, pp. 62-67. The project would be expected to generate a demand for housing in the Bay Area to the extent that new residents would be attracted and new households formed (see the last Response under Growth Inducement, p. 214). Demand for about 170 housing units would be expected. According to the 1979 Downtown San Francisco Conservation and Development Planning Program Phase I study, quoted on p. 104 of the Draft EIR, "continued employment growth in Downtown is likely to result in continued displacement of lower income residents and a higher rate of new housing construction." The businesses currently on the site would be displaced. One company might move to Santa Clara County; the remainder expect to relocate in San Francisco. Two have expressed an interest in retail and restaurant space in the proposed project (see also the Response under Relocation of Existing Businesses, p. 199). Rents in the existing buildings on the site would be expected to rise due to the current shortage of office space in San Francisco; rents would not be as high as in the proposed project which would be new construction. Construction of more office space to meet existing demand would ultimately have a stabilizing effect on office rental rates in the City.

The proposed project would shade the Two Embarcadero Center podium level in the afternoon (not at mid-day) in mid-March and mid-September (see also the Response under Shadow Effects on p. 178). Two buildings rated "B" in the Heritage survey, and "O" and "I" in the City Planning Department Inventory would be demolished to permit construction of the proposed project.

The project would generate a demand for about 420 parking spaces. It would add about 200 Muni riders at the p.m. peak hour. An estimated 42% or about 600 of the project employees would be San Francisco residents (see the revised Transportation, Circulation and Parking section on pp. 74-89).

The ground floor of the proposed project would be retail space, approximately the same amount of retail floor area in use in the existing buildings. The number of maintenance and service jobs provided by the proposed project would be similar to existing employment on the site (see also the Response under Businesses and Employment Displaced from the Site, pp. 196-199).

CUMULATIVE IMPACTS

Comment:

Ms. Susan Parker

"What are the regional air pollution impacts estimated for cumulative development? ... What attempts are being made to mitigate the regional air quality impacts?"

Response: The only pollutants of regional concern from cumulative development would be ozone (photochemical oxidant) and its precursors, hydrocarbons and nitrogen oxides. When meteorological conditions such as stable atmosphere, low wind speeds and strong sunlight exist, hydrocarbons and nitrogen oxides (which are directly emitted) photochemically react to form ozone. This process is extremely complex and takes approximately 1 to 3 hours before significant ozone concentrations occur. It is thus a regional phenomenon due to transport and diffusion by wind concurrent with the reaction process. Ozone impacts from cumulative development cannot be accurately quantified because of the complexity of the photochemical process and because vehicular emissions of hydrocarbons and nitrogen oxides attributable to cumulative development would be spread over a large part of the Bay Area.

In addition, hydrocarbon and nitrogen oxide emissions due to cumulative VMT (943,000 miles per day) would be less than approximately 0.01% and 0.01%, respectively, of the regional emissions in 1985 (shown in Table 20, p. 92 of the Draft EIR). The effect on regional ozone concentrations from emissions of this magnitude spread over a large area would not be detectable.

A revised Air Quality Impact Section, IV.G., based on the revised Transportation, Circulation and Parking section (IV.F.) has been included in the Draft EIR on pp. 89-93.

Ms. Susan Parker

"What are the impacts of cumulative development on... the energy consumption figures contained in the Environmental Impact Report ... increased electrical demand due to cumulative downtown development through 1990 will be responsible for most of the capacity expansion which PG&E plans for its Potrero Point power plant."

Response: The correct cumulative energy demands of downtown office development would be about 454 million cu. ft. of natural gas per year and about 254 million kilowatt hours of electricity per year. The first paragraph on p. 100 of the Draft EIR has been revised to reflect this. The proposed Potrero Unit Number Seven would have a capacity of 400 megawatts; however, it would replace Potrero Units Numbers One and Two which have a combined capacity of 116 megawatts. This means that the proposed additional capacity would have a maximum generating potential of about 2.5 billion kilowatt hours per year. Thus the cumulative demands

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of downtown development represent about 10% of the maximum capacity of the proposed Potrero Plant expansion. Since the Potrero plant provides power into PG&E's distribution grid, it is not possible to identify the exact point of use.

Ms. Susan Parker

"...what will be the impacts on the State's water resources?... What would be the impacts of such increases in terms of economic costs and environmental costs (more land devoted to water storage, new dams, etc.)?"

Response: According to George Nakagaki, Assistant Manager of the City Distribution System of the San Francisco Water Department (telephone communication, 19 July 1979), the Water Department has no exact figures on total water main capacity in Downtown San Francisco. Mr. Nakagaki estimates that the existing distribution capacity would not be exceeded at full maximum development of the Downtown under the existing City Planning Code. The capacity of the Hetch Hetchy reservoir system in the Sierra to provide water to the San Francisco Bay Area exceeds the capacity of the pipeline system which transports the water to reservoirs on the Peninsula. The main increase in water demand for the San Francisco Water Department occurs in San Mateo, Santa Clara and Alameda counties which have increasing populations. No new dams or water storage facilities would be needed to serve development in Downtown San Francisco.

Ms. Susan Parker

"Your EIRs should address the regional and statewide impacts of downtown San Francisco's growth. Otherwise, many of the impacts and costs of these projects will remain hidden, preventing an accurate assessment of the impacts and rational decision-making by the appropriate governmental agencies."

Response: The regional effects of cumulative Downtown development are addressed in the Draft EIR to the extent that available information allows and the magnitude of potential impacts warrants. Regional impacts on construction and permanent employment, community services, utilities, land use, transit agencies, street systems, air quality, energy consumption and housing are among those analyzed in the Draft EIR.

The number of inestimable variables involved in assessing statewide impacts, and the relatively small incremental contribution of San Francisco City office growth to statewide growth of all types precludes estimates with any degree of accuracy. The Draft EIR has been reviewed by State agencies which received copies through the State Clearinghouse. State agencies then commented on any aspects of the Draft EIR of concern to them; their comments have been responded to in the Summary of Comments and Responses.

MITIGATION MEASURES

MITIGATION- URBAN DESIGN

Comment:

Minutes of The Landmarks Preservation Advisory Board, 5 March 1980

"On page 107, Number 3, resolution should say sign standards should be approved by the Planning Department."

Response: The sentence is modified by adding the following underlined words: "The design of signs and graphics would be controlled by the City Planning Commission to avoid a garish or distracting appearance."

MITIGATION- WIND

Comment:

Mr. Toby Rosenblatt, President, City Planning Commission

"Mitigation measure on page 108 which talks about street trees and small structures for wind protection, I would suggest should be reconsidered. That may take care of wind mitigation, but it creates I think serious problems in terms of pedestrian conflict."

Response: As shown in the Draft EIR, Table 6, p. 37 and described in Table F-1, p. 159, the sidewalks are free-flowing with low volumes. The proposed building design has only one building entrance opening directly onto the sidewalk. Pedestrian shelters close to the building front would not interfere with normal pedestrian flow to any greater degree than multiple doorway openings to the sidewalk. The pedestrian impacts of the project would not reduce the Level of Service on the adjacent sidewalks below A as shown in Table 15, p. 83 of the Draft EIR, and described in Table F-1, p. 159 of the Draft EIR.

Average street trees in planters with a 3.0 ft. pavement cut would reduce the effective width of a sidewalk by 2.5 feet. Thus, the effective width of the Battery Street sidewalk would be 9.1 feet and the effective width of the Sacramento Street sidewalk would be 5.7 feet. Analysis of the pedestrian volume shown in Table 15 of the revised Transportation section shows that no change in Level of Service would result from inclusion of street trees.

<u>Sidewalk</u>	<u>With Trees</u>		<u>Without Trees</u>	
	<u>Rate</u> <u>(p/f/m)</u>	<u>Level of</u> <u>Service</u>	<u>Rate</u> <u>(p/f/m)</u>	<u>Level of</u> <u>Service</u>
Battery St.	3.7	A	2.9	A
Sacramento St.	2.6	A	1.8	A

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As stated on p. 108 of the Draft EIR, the installation of street trees is under consideration. The project sponsor would be willing to install street trees if this is desired by the City.

MITIGATION- TRANSIT

Comments:

Mr. Carl Imperato, San Franciscans for Reasonable Growth

"On page 110 is more talk about mitigation measures and a special downtown tax assessment district. We've heard about that for a year. I don't see that any steps have been taken to get it off the ground and to leave that as a mitigation measure in the EIR is a bit misleading."

Mr. David Jones

"They (Daon) are going to consent to join a hypothetical special district if it is ever formed. Well, the hypothetical special district has to be formed through the political process and that political process means the people of that district have to vote that new tax upon themselves. That is an incredible thing to happen and it hasn't happened yet and there is no movement to make it happen. It is your responsibility (as the Planning Commission) to find there is a problem and request them to come up with mitigation and I think it's a real affront to anybody who reads this EIR to call formation of the hypothetical special district, which some day may generate money and sufficient mitigation, to mitigate an impact which they have explicitly stated that they have, which is that this building is going to cost more money to the City the second it is built than it will generate in revenues for the City."

Mr. Tony Kilroy

"How will Muni provide the extra runs required to service Daon? What solutions does Daon have, aside from the token gesture of offering to participate in an assessment district, to fund the increased public transit needs and what concrete commitments will Daon make to satisfy this need?"

Response: The San Francisco Public Utilities Commission has submitted a draft ordinance to the Board of Supervisors that would establish a "Transit Impact Development Fee". This draft Ordinance, as currently written, would enable the City to require developers of non-residential projects (which generally includes retail establishments, offices, transient hotels, manufacturing units and warehouses) to pay, as a condition for the issuance of a building permit, a fee which is related directly to the incremental financial burden imposed upon the Municipal Railway both for initial capital outlay for the acquisition of rolling stock and the construction of facilities, and for the long term operation, maintenance and replacement of those facilities once they are in place.

The transit impact development fee schedule would be established by the San Francisco Public Utilities Commission on the basis of the projected number of peak-hour trips generated by new non-residential development in

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the downtown area and the cost per peak-hour person-trip incurred by the City in providing expanded service for the new development in the downtown area.

According to the draft version of the Ordinance, the Planning Commission would undertake a study to determine peak-hour trips generated by new non-residential development and the San Francisco Public Utilities Commission would conduct a study to establish the costs per peak hour trip that would be required to provide expanded transit costs for new downtown non-residential development.

As of 14 May 1980, the proposed Transit Impact Development Fee Ordinance is being reviewed by the Finance Committee of the Board of Supervisors (B. Delventhal, Attorney, City Attorney's Office, telephone communication, 14 May 1980). After reviewing the Ordinance, the Committee will hold public hearings on the Ordinance. Depending on the outcome of those hearings, the Finance Committee may decide to either drop the proposed Ordinance or to forward it to the full Board of Supervisors for consideration.

MITIGATION- ENERGY

Comment:

Mr. Charles Starbuck, Member, City Planning Commission

"This also has to do with pages 96 and 97, which is a discussion of energy consumption for the project. We could have some discussion of an alternative to the mechanical systems proposed for this project. That's the air-conditioning with the economizer cycle. The alternative to be considered would be openable sash and in particular any other features that are presently incorporated in the 505 Sansome Street building."

Response: Alternative mechanical systems would require computer analysis to determine if an energy savings would be realized. As noted in the first Response under Energy Consumption by the Project, p. 211, since the first system examined exceeded State Standards, the project architects did not make such an analysis of any other mechanical system. According to the mechanical engineer for the 505 Sansome St. building, energy-conserving features include: water-source heat pumps; centralized water loop system for heat exchange between parts of the building with different heating and cooling requirements; individual heat pumps for each floor or building zone controlled separately; individual "flash" water heaters for office needs (centralized hot water heater for utility core only); energy conserving light fixtures; tinted glass and openable windows. The 505 Sansome St. building meets, but does not exceed, the minimum Title 24 standards, although the building was designed and approved before the standards were mandated. The incorporation of openable windows in the 505 Sansome St. building was not chiefly for energy conservation, but rather were included with small balconies to suggest a residential character in the exterior design. Because there would be no control over the opening or closing of windows the provision

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of openable sashes cannot be demonstrated to save energy (M. Lipschultz, Mechanical Engineer for 505 Sansome St., Hellman and Lober, Engineers, telephone communication, 14 May 1980.)

The possibility exists that the building's energy needs could be met with a total energy system. Such a system would generate the electricity needed for the building on the site using the "waste" heat from the generator to provide building space heat and hot water and to drive the chillers for the air conditioning system. A total energy system for this building would be a substantial "point" source of air pollutants and thus could adversely affect local air quality.

The feasibility of a total energy system, the features incorporated in 505 Sansome St., or any other alteration of the proposed system should be evaluated for technical feasibility and for economic and energy costs and benefits in the proposed building in a manner similar to the evaluation done for the proposed system.

MITIGATION- HOUSING

Comment:

Ms. Sally Binford, Gray Panthers

"The DEIR for the Daon office building project, while identifying the extensive negative impact of the project on the San Francisco housing market (Growth Inducement, pp. 103 - 104), is severely deficient in failing to identify any mitigating measures for that negative impact. As a specific mitigation measure for the Daon office building project's negative impact on the City's housing market, Daon could agree to guarantee that the Victorian Hotel will continue in its present use for the lifetime of the existing master lease (in which Daon is a partner), until 1990, thus assuring an otherwise threatened existing housing resource for low- and moderate-income elderly. We request that this mitigation measure be specifically included in the EIR. We also request that this mitigation be required by the Department of City Planning as a condition of a permit for the Daon Building."

Response: According to Chen Shih-tso, President of 821 Market Street Associates, the master lease for the Victorian Hotel is held by 821 Market Street Associates, a joint venture between Daon Corporation and Rede Investment Corporation. The master lease is for a 12-year period from May 1978 to May 1990, with an option to purchase the property at any time during the term of the lease. The Hotel has been operated by a sublessee, the Victorian Continental Pacific Hotel Corporation, for the last 15 years under a lease due to expire on 30 April 1980. Over 6 months ago 821 Market Street Associates decided to sell its lease-option on the Victorian Hotel subject to certain conditions, one of which is that it continue to be run as a residential hotel for the foreseeable future. 821 Market Street Associates are currently negotiating with several purchasers and anticipate a sale in the near future. In the negotiations, 821 Market Street Associates have insisted upon and been guided by the following objectives:

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"That the purchaser be an experienced hotel operator, sensitive to the needs of a facility such as the Victorian Hotel.

"That the purchaser be aware of, and sensitive to the social-political problems and requirements that are existent at the Victorian Hotel.

"That the purchaser have enough substance (i.e., a net worth of over \$1.25 million) so as to be able to run a viable business.

"It has been made clear that the Victorian for the foreseeable future must be run as a residential hotel, subject to any solution to the needs of the tenants that can be offered by the purchaser.

"We have also required the reservation of any surplus development rights that are associated with the Victorian Hotel. This will be used with the development of Pacific III, and also assures that the Victorian Hotel will remain as a structure on that site."

(Source: Chen Shih-tso, President of 821 Market Street Associates, letter communication to J. Markey, Senior Projects Manager, Daon Office Centers, 24 April 1980. This letter is available for public review at the Department of City Planning, Office of Environmental Review.)

Comment:

Mr. Charles Forester, Director of Planning, ABAG

"... staff (ABAG) requests that the mitigation section of the Final EIR include a discussion of possible mitigation measures that would improve accessibility of housing for those likely to be employed in the proposed project. Such techniques as payment of fees to the city for housing construction (City of Palo Alto), rezoning of underutilized industrial lands, and bonuses for increasing residential densities should be reviewed as part of this discussion."

Response: Improving the housing supply in San Francisco is a citywide issue that is part of a regional need currently under review by the Board of Supervisors. The Board has adopted a rent control ordinance (Resolutions No. 276.79 and No. 295.79) and restricted condominium conversions (Resolution No. 337.79) as means of addressing the housing problem. The implementation of measures such as rezoning, density bonuses, and payment of fees as suggested by the commenter would require changes in policy by the Board of Supervisors. It should be noted that the 1978 Residential Rezoning resulted in City action to decrease permitted residential densities. Provision of bonuses for housing in Downtown highrises was under discussion in connection with the proposed Height Limit Initiative (Proposition O) which was defeated by the voters in November 1979. Housing is now permitted in downtown buildings and within zones where it was previously restricted. Further, the Mayor has established a Citizens Housing Task Force to address methods for increasing housing supply, especially for the demand resulting from

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downtown office highrise construction (G. Skiffer, Housing, San Francisco Planning Department, telephone communication, 9 May 1980.)

RESPONSIBILITY FOR DEVELOPING MITIGATION MEASURES

Comment:

Mr. David Jones

"... we learned over the years if you don't get mitigation right up front that you are not going to get very much mitigation at all... In this case somebody is coming to you for a building and there is one purpose for this building and that's to make money. And you as a Planning Commission, if they show adverse impacts, you are supposed to say: Before we give you this opportunity to make money in our City, if you show an adverse environmental impact you should mitigate it. It's their responsibility to come up with a mitigation package; it is your responsibility to say when it is acceptable."

Response: As stated in the Guidelines for Implementation of the California Environmental Quality Act (CEQA) of 1970 (Title 14, Div. 6, Chapter 3, Article 9, Sec. 15143c), "the discussion of mitigation measures in the EIR shall distinguish between the measures which are proposed by project proponents to be included in the project and other measures that are not included but could reasonably be expected to reduce adverse impacts." The CEQA Guidelines do not state that it is the exclusive responsibility of the project sponsor to develop mitigation measures. In accordance with CEQA Guidelines and the City Guidelines (ER8), the Draft EIR distinguishes between measures to be included in the project, measures recommended and under consideration, and measures rejected and the reasons for rejection (see Table 22, pp. 106-114 of the Draft EIR). Measures which have been agreed to by the project sponsor, but which require some action by the City, are noted within the pertinent mitigation measures (see the Response under Mitigation - Transit, p. 221).

SIGNIFICANT ENVIRONMENTAL EFFECTS

Comments:

Mr. Carl Imparato, San Franciscans for Reasonable Growth

"Next we come to page 115 and 116. This is the section on significant environmental impacts that can't be avoided if the proposed project is implemented. We feel that this section is so deficient.... that we put together our own little summary of what should have been in this section. And here are copies of the summary to the Commission." (From the summary prepared by Mr. Imparato:)

- "Loss of retail stores and restaurants in downtown area;
- Project would reinforce trend toward higher rents in area;

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- Project would cost City and County of San Francisco more in services than it supplies in revenues. Deficit would increase with time;
- Increase deficit of parking spaces downtown by 630 spaces;
- Increase in Muni overcrowding;
- Increase load for other transit systems due to 855 more commuters;
- Will increase residential rents in the City of San Francisco;
- Will result in increased displacement of lower-income residents."

Mr. Carl Imparato, San Franciscans for Reasonable Growth

"There is no mention in the section of the EIR of the significant environmental impacts of the housing effects; that construction of the building will tend to increase residential rents in the City of San Francisco... if we use the 10 percent figure, it would still be 10 percent coming into the City and that still comes out to about 800, given this project and the other projects... Given all the other ones, it would still be probably equivalent to the amount of housing to be constructed in the City. That is cumulative effect, but the EIR doesn't mention this building will contribute to this effect. So we feel this section should be fixed up."

Response: The ground-floor space of the proposed project would contain an amount of retail (and possible restaurant) space similar to that in the existing buildings on the site. The retail and restaurant establishments currently on the site plan to relocate elsewhere in the City or are interested in occupying space in the proposed project.

Rents in the proposed project would be higher than in the existing buildings because the project would be new construction. Rents in the existing buildings would be expected to continue to rise if the buildings were retained because the demand for office space in San Francisco currently exceeds the supply. Thus, construction of additional office space would ultimately help to stabilize rents.

Increased City and County property and payroll/business taxes and other taxes and user fees generated by the proposed project would offset incremental costs to the City and County of providing police, fire, water, sewer, general administrative and street-related services for the project site (see also the first Response under Impacts on Transit Operating Costs, p. 205). The Muni transit costs attributable to the Daon building would be partially offset by the property and payroll taxes generated by the project. The project would add about 200 peak-hour riders to the Muni system. This would be an increase of about 1% over the 1981 Base ridership; 1% is not a statistically significant increase. The project sponsor has agreed to participate in a fair and appropriate mechanism to fund transit (see the Response under Mitigation - Transit, p. 221). Project-generated ridership would not increase the peak-hour occupancy on any transit agency over 81%. The project would create a demand for about 420 parking spaces. The last paragraph on p. 115 of the Draft EIR has been revised to add: "The project would generate a daily demand for about 420 parking spaces."

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The demand for housing by project employees in conjunction with cumulative demand would have a general tendency to increase City residential rents and sale prices somewhat, but, in the context of future economic uncertainties, its influence on housing costs cannot be stated conclusively. Cumulative employment growth Downtown may result in displacement of lower-income residents and a higher rate of new housing construction.

The last paragraph on p. 116 of the Draft EIR has been changed to read:

"The project would contribute incrementally to the cumulative traffic, transit, parking, air quality and housing demand impacts of development now under construction and proposed in the Downtown business district."

Comments:

Mr. David Jones

"I would like this Commission to find that there is a serious Muni problem. I would like this Commission to find that some of the air quality problems, the transit problems, the parking problems are serious problems. I want you to find there is a Muni problem; I want you to find there is an economic problem. I want you to say: We do think this has an air problem; we do think this has certain problems on structures of this City; and force the project sponsor to come up with mitigation package."

Christopher Curry, San Francisco Tomorrow

"Based on the Draft EIR and on the testimony at the March 20th public hearing, San Francisco Tomorrow believes that the proposed Daon Building would have a significant adverse effect on the city environment."

Mr. Charles Starbuck, Member, City Planning Commission

"Also, I'd like to request at this time that the OER staff consider bringing before the Commission when this EIR is here for certification, language which would indicate using the data from the EIR, some of the cumulative impacts of downtown development in the following areas: Economic Aspects and Relocation, Transportation, Circulation and Parking; Air Quality; Growth Inducement, and Cultural and Historic. This language would be in certain cases a resolution separate from the language talking about environmental impacts for this project alone. But I would like to have the Commission consider that as part of the resolution for all further major downtown projects; that is, the cumulative impacts in those areas."

Response: The above comments request the City Planning Commission to find that the project, or that cumulative Downtown development, would have a significant adverse effect on the environment. See the above Response (p. 226) for a discussion of the project's Significant Environmental Effects.

ALTERNATIVES

"NO PROJECT" ALTERNATIVE

Comment:

Mr. Carl Imperato, San Franciscans for Reasonable Growth

"This is a section that... should not be glossed over, because the no-project alternative may be a very viable one... This section should be amended to include the statements that the deterioration of traffic and air quality conditions described on pages 50 to 105, this deterioration would not occur with the no-project alternative.

"The project's drain on City finances; tax revenues minus the cost of City services, that would be avoided with the no-project alternative. The increases in residential rents, the displacement of lower-income residents, that would be avoided in the no-project alternative.

"Shading of public areas would be avoided in the no-project alternative. Access to sunlight be reserved in the no-project alternatives. Displacement of 11 businesses, 250 workers, with loss of their jobs, that would not occur. The local retail environment would be preserved. The trends towards higher rents would not be accelerated.

"Parking problems: 630 more spaces would be avoided. And the no-project alternative should be put on equal footing with all other alternatives by comparing its impact with those of the proposed projects as well as to the present environmental impact."

Response: Since the no-project alternative represents the situation in which no change occurs on the project site, it is described generally in the Setting sections of the Draft EIR (section III., pp. 17-49). As stated on p. 117 of the Draft EIR, "traffic, transit, and air quality conditions described as 1981 Base conditions with cumulative development would exist on streets around the site" (see revised IV.F. and IV.G., pp. 73-89 and 89-93 of the Draft). Parking availability would also be as described under 1981 Base conditions with cumulative development. The incremental transportation, parking and air quality impacts of the project would not occur.

Also as stated on p. 117 of the Draft EIR, "total composite property taxes would remain at about \$19,000 per year and property tax revenues to the City and County of San Francisco would remain at about \$16,300 per year, increasing at the 2% annual rate allowable under Proposition 13." Increased revenues from the project would not be generated. As the demand from the site for community services would not increase, the cost to the City to supply services would not increase (other than due to inflation).

The no-project alternative would have no effect on housing supply or demand. As stated on p. 103-104 of the Draft EIR, the project would generate "additional demand for housing in San Francisco and the region, now in short supply.... This increased demand will have a general

XI. Summary of Comments and Responses

tendency to increase City residential rents and sales prices somewhat, but in the context of uncertain future construction activity, inflation and other sources of housing demand, its influence on future housing costs cannot be stated." The no-project alternative would have no effect on housing supply, costs or demand.

The existing businesses on the site, employing approximately 220 persons, would not be displaced under the No-project alternative. Rents under the no-project alternative would continue to increase due to the existing shortage of office space in the City; rents would not be as high per sq. ft. as with the proposed project which would be new construction. Additional employment for approximately 995 persons in the proposed project would not occur. The ground-floor uses on the site would remain retail-commercial and restaurant uses under the No-project alternative, as well as with the proposed project.

SAVINGS OFFICE ON THE SECOND FLOOR

Comments:

Ms. Susan Bierman, Member, City Planning Commission

"There is quite a bit about the second floor not being appropriate for the major tenant because elderly can't... get up to the second floor on the escalator."

Dr. Yoshio Nakashima, Member, City Planning Commission

"Then I guess there was one statement on (page) 121 about the elderly having a difficult time to go to the second floor and even though it is no longer valid, I'd like to say that I thought it was an inappropriate statement because unless I am mistaken, I don't think there is that many elderly that would be using the savings and loan at that location."

Response: As noted on pp. 120-121 of the Draft EIR, the difficulty in access presented to elderly customers by escalators is one of the reasons given by San Francisco Federal Savings and Loan Association for rejecting a second floor location for the savings office and is attributed to Ernest J. Piccone, Corporate Savings Manager. The statement was the opinion of San Francisco Federal Savings and Loan, based on the number and perceived needs of elderly customers they have at their current main savings office at Post and Kearny Sts. Because San Francisco Federal Savings and Loan is no longer the principal tenant and Daon Corporation now proposes no ground-floor financial institution tenant, the discussion of the savings office on the second floor has been deleted from the Draft EIR.

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INITIATIVE-CONFORMING ALTERNATIVE

Comment:

Ms. Susan Bierman, Member, City Planning Commission

"On page 123 there at the top of the page, the last sentence of the first paragraph, 'The walkways would be shaded by existing buildings in the proposed tower most of the day at most times of the year.' That's about the building itself. Then 'shadows on the podium level of Two Embarcadero Center would be reduced'. This is in discussing the alternative which is the Initiative-Conforming Alternative. I'd like to know how much it would be reduced."

Response: The project would cast shadows on the podium level of Two Embarcadero Center during mid-March and mid-September from about 1:30 p.m. to 3:30 p.m. (solar time) (see Figure 25a, p. 59a). The 185-ft. high Initiative-Conforming Alternative would cast shadows of approximately half the length of the 350-ft.-high project, as indicated by the arrows on Figure 25a. The shadows cast by the Initiative-Conforming Alternative would not reach the pedestrian areas of the Two Embarcadero Center podium-level space.

Comment:

Minutes of The Landmarks Preservation Advisory Board, 5 March 1980

"On page 121, there should be a drawing of the alternate design which conforms to Proposition O restrictions. Mr. McGrew noted that that section should be rewritten to reflect the moratorium on bonus provisions. Mrs. Kortum questioned whether it should be in the report at all."

Response: Numerous different alternative designs could be developed which could conform to the restrictions of Proposition O. The purpose of the Initiative-Conforming Alternative is to present the relative impacts of a building of reduced height and floor area for comparison with the proposed project.

Several building envelopes conforming to the Initiative were studied by the project sponsor and are available for public review at the Department of City Planning, Office of Environmental Review, as stated on p. 120. The current moratorium on bonuses would not affect this Alternative which would not exceed the Basic Floor Area Ratio in the C-3-0 District of 14 to 1.

XI. Summary of Comments and Responses

Comments:

Minutes of The Landmarks Preservation Advisory Board, 5 March 1980

"On page 123, last paragraph before reading 'variant incorporating', there are other buildings in the vicinity besides Embarcadero Center. Please discuss the proposed project in light of neighboring low-rise buildings as well."

Minutes of The Landmarks Preservation Advisory Board, 5 March 1980

"The phrase (on p. 123) 'elimination of the proposed pedestrian way is not desirable' is subjective. Someone else might conclude otherwise."

Response: It is stated on p. 123 that it is the project sponsor who considers elimination of the proposed pedestrian way to be undesirable and considers a shorter building incompatible with One Embarcadero Center. These are presented as the reasons of the project sponsor for rejecting the Initiative-Conforming Alternative. They are not value judgments made by the Draft EIR.

INITIATIVE-CONFORMING ALTERNATIVE INCORPORATING HOUSING

Comments:

Ms. Susan Bierman, Member, City Planning Commission

"At the bottom of the page (p. 123) it says, 'Since the structures on the site have not been officially designated as landmarks, that bonus would not have been available to the project sponsors....' It seems to me that's over-simplified. Because if a project sponsor wants to save those buildings, surely this Commission and surely the Landmarks Board have given indications over the last year and certainly over the last couple of months that we are very interested in landmarks and in preserving landmarks and in preserving buildings that are on the special list. So that to me is, well, it is a misstatement because these buildings could be landmarks. I mean presumably they have an awfully good shot at it and the project sponsor could, you know, apply for that status or could ask us to apply for it or could ask the Board to apply for it or could ask the Landmarks Board. So that seems inaccurate to me."

Mr. Robert Berner, San Francisco's Architectural Heritage

"pp. 121-123. Initiative-Conforming Alternative. Wouldn't the project have been available for bonuses under Proposition O if the Newhall Building (at 260 California St.) had been declared a landmark? The DEIR only considers the housing bonus."

Response: The bonus specified in Proposition O for landmark preservation would not be necessary for the construction of the maximum Floor Area Ratio of 14 to 1 allowable under Proposition O. The variant incorporating housing thus discusses the maximum construction possible on the site, using the Housing Bonus proposed in Proposition O.

XI. Summary of Comments and Responses

Were the buildings on the site declared landmarks, then, presumably, they would not be torn down for project construction (see the Responses under Alternative Maintaining the Facades of 280 Battery St. and 353 Sacramento St., p. 234, and Alternative Retaining 280 Battery St. and 353 Sacramento St., p. 235). If the Newhall Bldg. at 260 California St. were a designated landmark it would not have permitted the use of the landmark bonus on the site under Proposition O because the Newhall Bldg. is not owned by Daon Corporation and could not be assured preservation by it.

Comments:

Ms. Susan Bierman, Member, City Planning Commission

"The project sponsor has elected not to propose such a design including housing because housing would require a conditional use authorization and additional security precautions would be needed. I just think that is the weakest reason for not doing housing."

Mr. Carl Imparato, San Franciscans for Reasonable Growth

"An alternative which would have more housing would be even more beneficial to the City... Why isn't this alternative chosen by the sponsors on page 126... I am sure you know that the Golden Gateway project is only 2, 2 and a half blocks away from the building site here and so it's not like we are trying to put residential units into the middle of totally office-dominated area."

Mr. Robert Passmore, Zoning Administrator

"I just want to note because the issues of the residential uses in C-3-0 requiring conditional use has come up, that was an error in the report. That will have to be corrected in that residential use, since the adoption of Residential Building Study changes in the Planning Code, no longer require Conditional Use authorization."

Ms. Ina Dearman, Member, City Planning Commission

"I really feel like it (housing) wasn't seriously considered even before Mr. Passmore said we don't need a conditional use. It's just the standard statement which lets me know, makes me feel in reading it that they never really seriously consider any kind of housing there."

Response: The provision of housing on the project site was considered by the project sponsor. Several alternative building envelopes conforming to Proposition O and containing housing units were studied by the project sponsor and are available for public review at the Department of City Planning, Office of Environmental Review.

As noted by Mr. Passmore in his comment above, since the adoption of Residential Building Study changes in the Planning Code, a Conditional Use Authorization is no longer required to permit housing in the C-3-0 District. Page 125 has been revised to reflect this and expand on the project sponsor's reasons for rejecting the alternative as follows:

XI. Summary of Comments and Responses

"The project sponsor has elected not to propose a design including housing for the following reasons: 'At its present height of 24 stories, the proposed building would be generally surrounded by buildings of greater height, such as the Embarcadero Center, 101 California St., and the Bank of America. Unlike the Golden Gateway, long-range views of the Bay and City would be very limited. For this reason the project sponsors do not believe people would find it an attractive place to live. In addition, a mixed-use residential and office project would impose functional and economic constraints on the designer and developer; these include the provision of separate elevators for each use as a security measure, additional plumbing and wiring costs, and the provision of parking for residents. These factors combine to reduce the productive floor area within the building at the same time as they increase the cost. Therefore the building becomes less functional and more costly', (J. Markey, Senior Project Manager, telephone communication, 14 May 1980)."

Dr. Yoshio Nakashima, Member, City Planning Commission

"And then lastly, about the housing, I think of any place in the downtown area, this particular site would be a good place for housing, and to say that it is going to cost over \$200,000 and that it might be a negative effect, in today's economy is really not valid any more. Because I've heard a lot of discussion about the fact that \$200,000 isn't really a lot of money. And I guess to take that Golden Gateway is a good example, because I think those units there are going for in that neighborhood will probably be a lot higher. So it is a lot of money to me. But I think depending on who you talk to, \$200,000 is no longer considered a high amount of money."

Response: The Draft EIR does not state that the \$200,000 per-unit price for the condominiums in the Alternative Variant Incorporating the Housing Bonus would be a negative effect or a positive effect. The \$200,000 figure is an estimated price used to project property tax revenues to the City and County from the housing units for comparison with the proposed project. The exact price of such units would vary depending on market demand at the time of sale and actual construction costs. The Draft EIR does state on p. 124 (revised) that "these (condominiums) would probably be occupied by upper-income persons working in the Financial District and might also be leased or purchased by companies for use by out-of-town employees."

ALTERNATIVE MAINTAINING THE FACADES OF 280 BATTERY ST. AND 353 SACRAMENTO ST.

Comment:

Ms. Susan Bierman, Member, City Planning Commission

"The D alternative on page 126, it seems to me is too limited. We either need it expanded on or another alternative preserving the facades and I would say with a lower tower so that Embarcadero Center Two is not shaded in the spring and the fall.

"The EIR says the project sponsor rejected integrating those (buildings) because they are different heights. As an amateur, I have no way of knowing if that's a legitimate statement on their part. I don't know whether it's hard -- I am sure it is more difficult than if they were the same height. But we have had buildings; we have had developers, we have one coming up, who saved buildings and built towers on top of them. So I think we need a little more about that."

Response: As discussed on pp. 126-127 of the Draft EIR, maintaining the facades of 280 Battery St. and 353 Sacramento St. would require construction of an interior concrete or steel skeleton which would support both the brick facades and the newly constructed floors behind the preserved surfaces. This would result in lost floor area due to buttressing and bracing construction on the ground floor, and diminished floor area and duplicate exterior walls on floors up to 80 feet above the street level (in the 353 Sacramento St. building).

The buildings are of greatly different heights, contrasting design and proportions. In addition the window areas, window openings, floor-to-ceiling heights, and cornice lines are dissimilar; new interior floor plans and heights could correspond to one of the existing buildings, but not both. The facade of the upper floors of the taller building (353 Sacramento St.) would be visually isolated from the adjacent lower structure and new building. In the opinion of the project architect, as stated on p. 126 of the Draft EIR, "incorporation of the 2 facades into a coherent building design would be difficult... because they are not of the same height or architectural style." An alternative maintaining the facades would not incorporate a pedestrian way, lobby and retail accessibility, coordinated signing and landscaping or uniform architectural style proposed by the project.

Shading of the Two Embarcadero Center podium level by a tower lower in height than the proposed project is discussed in the first Response under Initiative-Conforming Alternative, p. 230.

ALTERNATIVE RETAINING 280 BATTERY ST. AND 353 SACRAMENTO ST.

Comment:

Mr. John Elberling, San Francisco Tomorrow

"The alternative that we would request to be included in this EIR and analyzed is as follows: The maximum FAR of the whole site be 14 to 1, as proposed by interim controls if they happen to apply to this grandfathered building. The two existing B buildings on the site would be retained as they are, remodeled; the building on the corner could be gutted and converted into savings and loan branch office very easily. The 6-story office adjacent to it conceivably could be linked to the smaller building and serve as additional offices for that savings and loan branch and there is a potential to attach a mezzanine to it within that smaller building on the corner. And the upper floors would be rented out, as they are currently. That's on 24% of the block. And that amounts to some 16,000 feet of floor area for your computation. For the other 200,000 square feet permitted under the 14 to 1 ratio for that site will be contained in the tower. You can analyze any height you would like. The tower would have its elevator core in roughly the same location as currently proposed along the east lot line of the project. It ought to have a step down on that very short 40 feet or so on Sacramento Street where the new structure could reach Sacramento Street so that the height on Sacramento Street is compatible with the existing block face. And the main tower, however tall it is, would have some setbacks and upper floors to provide some interest to the shape of the building and to relate to the other existing buildings in the area.

"One important point as they analyze this alternative. If they claim that this results in average floors in the tower that are too small to be practical, they are going to have to show why the average floor sizes in Pacific Mutual, 601 Montgomery, 180 Montgomery and 486 Montgomery are all 14,000 square feet of floor space or smaller, when it is clearly possible to put 14,000 average square foot floor in this tower as this alternative proposes. So they would have to provide ample evidence for their statement which shows why it wouldn't be economical for their building but economical for the other four.

"What you have are 2 fine B-rated buildings by Heritage's survey on the corner that occupy only 24% of the site. And the developer certainly had the option to preserve and remodel those 2 buildings and build their tower on the other 76% of the site. They had that option. They haven't exercised it in their design and they haven't analyzed it as an alternative. The alternative they did analyze was historic preservation which is not at all the same thing."

Response: Analysis of an alternative design based on the description provided by the commenter has been added to the Alternatives sections (VII.) on p. 127.

XI. Summary of Comments and Responses

ALTERNATIVE WITH SHORT-TERM PARKING

Comment:

Mr. Toby Rosenblatt, President, City Planning Commission

"The alternatives or the discussion should include some consideration of including the 7% maximum parking, such parking to be designated specifically as short-term parking with appropriate rates to insure that that's true and prohibitions on monthly parking. So that it does not conflict with the cited sections of the master plan. But it would be an approach to taking care of the deficit with respect to short-term parking."

Response: An Analysis of alternative designs incorporating short-term parking have been incorporated into the Alternatives section (VIII.) on p. 127d.

BUILDING SETBACK ALTERNATIVE

Comment:

Ms. Ina Dearman, Member, City Planning Commission

"I guess I just would like it not to be a foregone conclusion that it would be a building to the property line in contrast to the buildings across the street, Embarcadero Center."

Response: The proposed project would be built to the property line at the ground level. Upper stories would be set back in 3 locations as shown in Figure 2 on p. 7 of the Draft EIR (see also the revised Figure 2, p. 7a, which shows more architectural detail). One Embarcadero Center is set back from the property line at the street level and upper level as shown in Figure 2. The second-floor facade extends to the property line providing pedestrian shelter on the sidewalks near the building. Alternative designs could be formulated providing a street-level pedestrian arcade or different arrangement of setbacks on the the upper levels of the project tower. Under the California Environmental Act (CEQA) the Planning Commission may approve an alternative design which is not specifically addressed in the Draft EIR or a combination of alternative designs.

APPENDIX E, TABLE E-2

Comment:

Mr. Toby Rosenblatt, President, City Planning Commission

"On page 157 in a footnote with the three asterisks there are indications of the two buildings under construction. 755 Market Street and Market and Main Street. Those are not under construction. I don't know what the Market and Main Street building is. In fact, I don't recall I ever heard reference to that."

Response: As noted by the commenter, the 775 Market St. Building is not under construction; construction of an office building at this site as part of the Yerba Buena project is no longer being considered. The Market and Main St. building should be listed as the Howard and Main St. building. The building was completed in October 1979. The 775 Market St. building has been deleted from Table E-2, p. 157 of Appendix E of the Draft EIR, and the Howard and Main Sts. building has been added to the completed buildings 1970-79 category.

● XII. CERTIFICATION RESOLUTION

SAN FRANCISCO
CITY PLANNING COMMISSION
RESOLUTION NO. 8610

WHEREAS, A draft environmental impact report, dated February 15, 1980 has been prepared by the Department of City Planning in connection with

EE79.57: Daon Building

on the property described as follows:

Southeast corner of Sacramento and Battery Streets
Lots 14, 15 and 16 in Assessor's Block 237

WHEREAS, The Department duly filed a notice of completion of the draft report with the Secretary of the California Resources Agency, gave other notice and requested comments as required by law, made the report available to the general public and satisfied other procedural requirements; and

WHEREAS, The City Planning Commission held a duly advertised public hearing on said draft environmental impact report on February 15, 1980, at which opportunity was given for public participation and comments; and

WHEREAS, A final environmental impact report, dated May 29, 1980, has been prepared by the Department, based upon the draft environmental impact report, any consultations and comments received during the review process, any additional information that became available, and a response to any comments that raised significant points concerning effects on the environment, all as required by law; and

WHEREAS, On May 29, 1980, the Commission reviewed the final environmental impact report, and found that the contents of said report and the procedures through which it was prepared, publicized and reviewed comply with the provisions of the California Environmental Quality Act., the Guidelines of the Secretary for Resources and San Francisco requirements;

THEREFORE BE IT RESOLVED, That the City Planning Commission does hereby find that the Final Environmental Impact Report, dated May 29, 1980 concerning

EE79.57: Daon Building

is adequate, accurate and objective, and does hereby CERTIFY THE COMPLETION of said Report in compliance with the California Environmental Quality Act and the State Guidelines;

XII. Certification Resolution

AND BE IT FURTHER RESOLVED, That the Commission in certifying the completion of said Report does hereby find that the project as proposed will not have a significant effect on the environment;

AND BE IT FURTHER RESOLVED, That the Commission does hereby find that continued major development may have significant cumulative impacts on economics, relocation, transportation, circulation and parking, air quality, growth inducement, cultural and historic aspects, and energy consumption patterns in the Downtown area, and that this project will contribute to those impacts, although on an incremental basis;

AND BE IT FURTHER RESOLVED, That the Commission, before acting on the project itself under DR80.6, does hereby certify that it has reviewed and considered the information contained in said Final Environmental Impact Report.

I hereby certify that the foregoing Resolution was ADOPTED by the City Planning Commission at its regular meeting of June 12, 1980.

Lee Woods, Jr.
Secretary

AYES: Commissioners, Bierman, Dearman, Karasick, Kelleher, Nakashima, Rosenblatt and Starbuck.

NOES: None

ABSTAINED: None

ABSENT: None

PASSED: June 12, 1980

This is a true and exact copy of the Resolution approved by the City Planning Commission and any changes on its face were duly authorized by the City Planning Commission and initiated by me.

